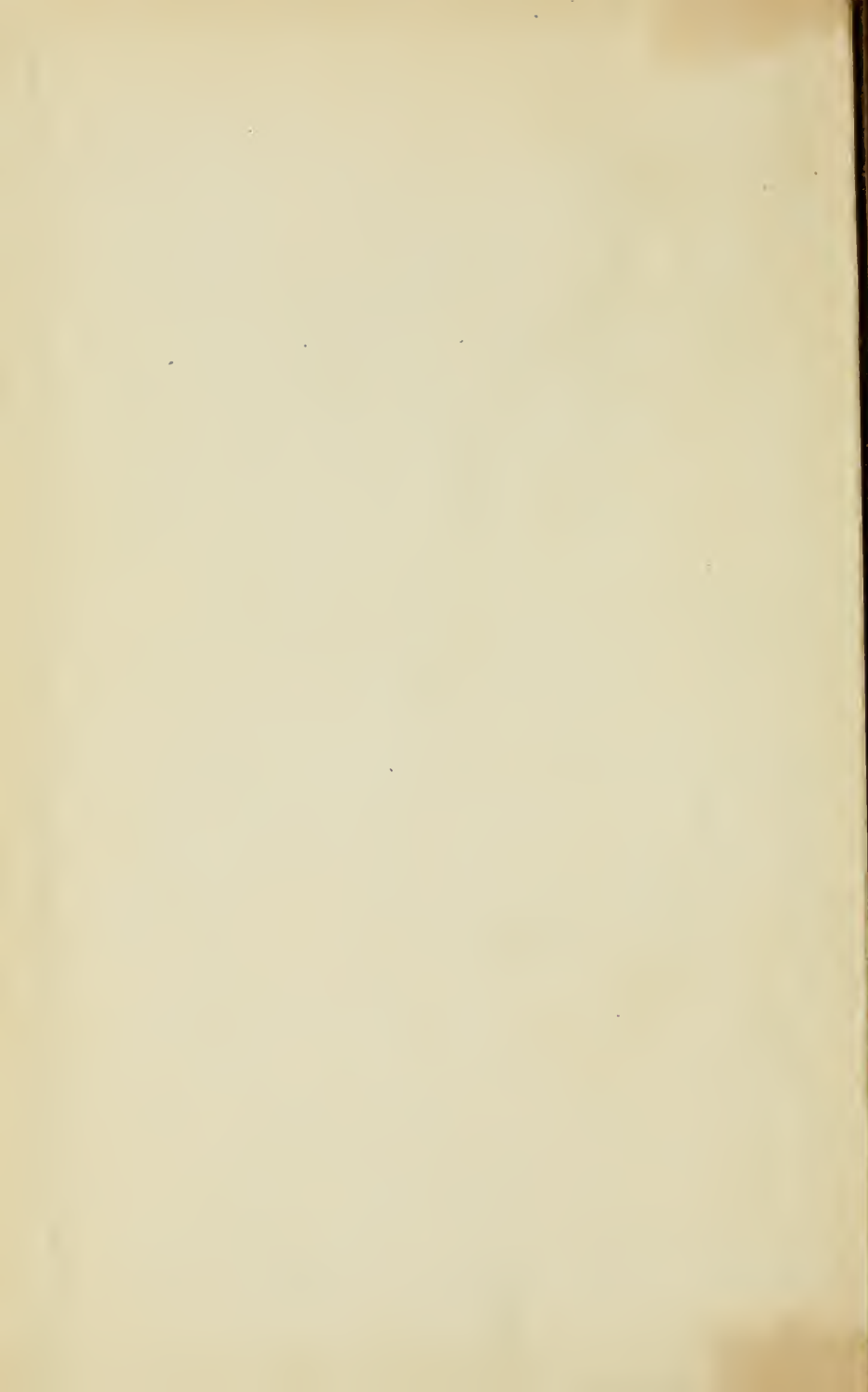


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NOTICE.

THE Council of the Statistical Society of London wish it to be understood, that, while they consider it their duty to adopt every means within their power to test the facts inserted in this Journal, they do not hold themselves responsible for their accuracy, which must rest upon the authority of the several Contributors.

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QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY.

MARCH, 1854.

Résumé of the Statistical Congress, held at Brussels, September 11th, 1853, for the purpose of introducing unity in the Statistical Documents of all Countries. By LEONE LEVI, ESQ., F.S.S., &c.

[Read before the Statistical Society of London, 21st November, 1853.]

THE readiness evinced of late by all Governments to co-operate in the promotion of science and of subjects of general utility, is one of the most prominent features of the age in which we live. The affinity of interests which binds all nations of the earth is better understood and appreciated; the study of natural laws, in their relation to society, is more expanded and intelligent; the institutions of all countries are closely scrutinized, and rather than be wedded to antiquated systems, each is eager to profit by the experience of the other. Statistics are the safest guides for the appreciation of institutions. They are the records, not of theories, but of results. They reveal all that is defective; they are the instruments by which the truth or fallacy of principles is unanswerably tested; and by them comparisons may be instituted. But there can be no comparison without a common point and a common channel. This is wanting in statistics. They are collected in all countries, but without unity of purpose they reveal no phenomena, and illustrate no universal law; without uniformity in the forms and language of statistical documents they afford no basis for comparison. To supply this desideratum was the object of the Statistical Congress. It aimed at realising a new era in this cosmopolitan science; it had for its object to facilitate the means by which nations may be beneficial to one another;—to clear the path by which the laws of population, of production, of mind, and of morals may be better ascertained,—and to diminish the barriers which yet intercept the social, commercial, and scientific intercourse of nations.

I. Belgium and the Meteorological Congress.—The kingdom of Belgium, though limited in its extent, holds a high rank amongst

Note.—This report is founded mainly upon the report from the “*Moniteur Belge*,” compared with the programme issued by the “*Statistical Commission of Belgium*,” and in some special points assisted by the able report in the “*Morning Chronicle*,” accompanied with such observations on the subject as presented themselves to my mind.

the civilised states of Europe. Rich in her population, produce, and manufactures, with a Government founded on most liberal and progressive principles, and with institutions in perfect harmony with the tendencies of the nation, she steers on in the march of progress, and aims at being the leader in scientific investigations and economical researches. It is in Brussels, her ancient and sumptuous metropolis, that several congresses of vast importance have been held on prison discipline, free trade, universal peace, public health, meteorological science, and, lastly, on statistics. Eminent individuals are thus brought together, and there results such a fusion of ideas, such a sympathy of feeling, and such a unity of design, that the subjects of inquiry receive at their hand the greatest impulse and the most enlightened direction.

II. *The Meteorological Congress.*—The Meteorological Congress was held at the invitation of the Government of the United States of America, for the purpose of concerting a systematical and uniform plan of meteorological observation at sea. It was attended by official representatives from the Governments of Belgium, Denmark, France, Great Britain, Netherlands, Norway, Portugal, Russia, Sweden, and the United States. The plan of adopting uniformity of system in meteorological observations was first propounded by Captain James, of the Royal Engineers, but it had reference to observation on land. Some papers on the subject having been presented to the House of Lords, and the British Government not having given immediate execution to the proposal, the United States' Government brought under the notice of the British Government a comprehensive plan of meteorological observation at sea, submitted by Lieutenant Maury, and invited each nation to hold a conference at Brussels. The Congress met on the 23rd of August, 1853, and continued its sittings till the 8th of September.

They concerted a plan of uniform observation, and also adopted a common mode of register in a form of abstract log, to be used by the navies, and possibly by the commercial marine of all nations. The abstract log is divided into twenty-two columns; the first and second to contain the dates and hours when the observations are made; the third, fourth, fifth, and sixth, the latitude and longitude by observation and by dead reckoning; the seventh and eighth, the direction and rates of currents; the ninth, the magnetic variations observed; the tenth and eleventh, the state of the barometer and thermometer; the fourteenth and fifteenth, the dry and wet bulb thermometer; the sixteenth, the form and direction of the clouds; the seventeenth, the proportion of clear sky; the eighteenth, the number of hours of fog, rain, snow, and hail; the nineteenth, the state of the sea; the twentieth, the temperature of the water at the surface; the twenty-first, the specific gravity of the water at the surface or at different depths; and the twenty-second, the temperature of the water at different depths. There is, moreover, a column of remarks to contain every thing which the captain may consider useful. In order to facilitate the plan of uniform observation, the Congress recommended that, with regard to thermometers, in addition to the scale in use in any particular service, that of the centigrade should also be placed upon it. It recommended the adoption of accurate barometers and

thermometers, and the use of such only as have been compared with recognised standards.

This important Congress has thus laid the basis for the discovery of new courses of navigation, for ascertaining the laws which govern atmospherical and electrical phenomena, and for rendering both the navy and mercantile vessels instrumental in bringing, in the words of their official Report, "every part of the ocean within the domain of philosophical research, and in spreading a system of investigation as a net over its surface, so that it may become rich in its benefits to commerce, navigation, and science; and productive of good to mankind."

III. *The Statistical Congress.*—The Statistical Congress was called by the Central Statistical Commission of Belgium, presided over by M. Quetelet, an energetic and scientific mind, illustrious in sciences and political economy; and the invitation was responded to by a large number of Governments, scientific societies, and learned individuals from all countries. The Congress was opened on Monday, the 19th of September, 1853. Official representatives were present from Austria, Baden, Bavaria, Belgium, Denmark, Egypt, France, Frankfurt-on-Maine, Great Britain, Hamburg, Hanover, Hesse-Cassel and Grand Ducal Hesse, Lubeck, Netherlands, Norway, Portugal, Prussia, Sardinia, Saxony, Spain, Switzerland, Tuscany, Two Sicilies, United States, and Wurtemberg. M. Piercot, Minister of the Interior of Belgium, was elected President, and Messrs. Farr, Villermé, Dieterici, Mittermaier, Akersdyck, Ramon de la Sagra, Czoernig, and Bertini, Vice-Presidents.

The introductory address was delivered by M. Quetelet, and, with a view to ascertain what means are now adopted for the collection of statistics, and what organization for statistical purposes exists in the different states, a statement on the subject was made by a deputy from each state. It was thereby shown that in most of the principal countries of Europe general statistical departments have been established, and in others, as in the United Kingdom, statistics are collected by each department of public administration. A statistical department was instituted in this country by the Earl of Auckland on the suggestion of, and long ably directed by, the lamented Mr. Porter, of the Board of Trade, but its functions are limited, and, moreover, the form and occasion of all statistical publications are different. Much is left to chance. True, every member of both Houses of Parliament may demand a return upon any subject, but such a system is extremely irregular, and the documents issued are so scattered and uncertain with regard to time of publication and their contents, that often a lengthy search proves abortive of any results. It is much to be regretted; also, that the statistical returns are sometimes given for England and Wales, sometimes for Great Britain, and at other times for the United Kingdom, which causes much confusion and miscalculation. The statistical department connected with the Board of Trade superintends principally the statistics of commerce and navigation. With respect to the statistics of population, the last census of Great Britain, and the abstract of births, deaths, and marriages in England, have been directed by the Registrar-General of England, and been analyzed in the statistical depart-

ment of that office. The last census of Ireland has been taken under the instructions of the Registrar-General of Ireland.

IV. *Statistical Organizations.*—The Congress, according to a programme issued by the Central Statistical Commission of Belgium, first considered the question of statistical organization, with a view to the adoption of some uniform basis in all countries, both in the modes of collecting statistics and in the official publication of statistical documents. It is greatly to be desired that henceforth the statistics of countries may be compared. To realise this, some general basis must be adopted; we must settle on the nomenclature of things; we must, so to say, adopt a universal language for the purpose, and simplify the tables which are to be the basis of comparison. The best instrumentality for the accomplishment of such an object is the creation, in each state, of a central statistical commission, or an analagous institution formed of the heads of the administration with the addition of some individuals eminent in statistical science, the central commission communicating with branch commissions in the provinces for all that is local or provincial. The central statistical commissions of all countries might be in constant communication among themselves, exchange their publications, and also transmit to each other the schedules used for the collection of information, so that they may be classified and organized. In order, also, to furnish the easiest means for the transmission of such documents, it was recommended to establish in each country a centre, or a person especially dedicated to send and receive all communications and publications of a statistical character. The statistical accounts were recommended to be made as accessible as possible, especially in the most useful parts, by publishing, at reduced prices, the summary tables with explanatory texts.

The importance of such arrangements is patent. Great difficulty is at present experienced in obtaining information from foreign governments through the want of knowing what is actually published in other states, and through whose medium it may be ascertained. Equally important is the suggestion of publishing the summaries of statistical documents at moderate prices, as their bulk is a complete barrier, not only to the purchase of them, but also to their being easily handled and studied, the practical information they contain being often buried in the amount of particulars, chiefly of local interest.

V. *Population.*—The law of population is the most important subject of statistics. To ascertain the various causes which affect the state of population—to appreciate the true relation of all the social elements—and to show how each individual contributes his quota to the solution of the great human phenomena, are the labours of consummate philosophy and of deep mathematical science, able to grasp at great truths, fix their principles, and deduce their consequences. The wider the sphere of observation the more solid will be the laws which it discovers. The recurrence of facts under different climates and in different states of society, and the modifications which certain laws assume as elements are changed or modified, are sources of careful study to the statist who takes man as the centre of his observation. Yet this important study is now restricted to small divisions of the human family, owing to the want of uniformity and unity in the collecting of the census in different countries. In England the

United States, Sardinia, Norway, and the Netherlands, the census is collected decennially, in France every five years, in the German States triennially, in Belgium at variable periods. Besides, great variety exists in the items of information collected, and on the principles on which the censuses are based. The Congress had the subject under careful consideration, and after considerable discussion it came to the following recommendations:—

1. That the census of population should exhibit the number of individuals actually in the country at the date of enumeration; and also such particulars as may be required of those individuals who have legal domicile in the country, although absent from it.

2. The census to be taken not less frequently than every ten years, and in the month of December.

3. A special return for each family or household.

4. Special agents, or enumerators, to be employed.

5. The returns to state name and surname, age, place of birth, spoken language, religion, condition, whether single, married, or widowed, profession, or occupation, residence, whether temporary or permanent, children receiving education, houses by stories, and number of rooms occupied by each family, gardens in connection with the house, existing sickness, number of blind, deaf and dumb, absentees, and number of persons residing in public or private establishments.

In addition to the above there ought to be an annual registry of population, exhibiting the births by sex, by age of both parents, legitimate and illegitimate, number of twins, stillborn, deaths, marriages and divorces, by months. The deaths, by sex, by age, and by months, distinguishing among dead children, till three years of age, the legitimate from the illegitimate. The deaths by months, with the causes of death, and the profession of the deceased; marriages, with the age of the parties, their condition, profession, and number of children, distinguishing the legitimate and those acknowledged as such. Considering the extreme importance of a uniform nomenclature of diseases equally applicable to all countries, the attention of learned men is to be called to the question for further consideration at some future congress.

VI. Territory. National Survey.—The question of population is immediately connected with that of territory, and with the national survey. In Great Britain the survey has hardly been commenced, though in Ireland it is complete. The Congress adopted the following general recommendations:—That it is desirable that each country shall be surveyed and mapped in a uniform manner. The statistical portion of the national survey should include the survey of the boundaries of the communes and their sectional divisions, the triangulation, the detail survey of roads, fields, &c., and the map of the whole country to be laid down on the ordinary scale of 1-2,500 (about our common scale in England of three chains to one inch, or 26 2-3 inches to one mile). The following modifications to be adopted under certain circumstances:—For forests and mountains the scale of 1-5,000, (nearly 13 inches to the mile), for villages and crowded districts 1-1,250, (say 50 inches to the mile); for maps of large towns intended for sewerage and sanitary

purposes, the scale of 1-500; general index maps to be on the scale, either of 1-10,000 or 1-20,000, (that is about six inches and three inches respectively, to the mile), for the purpose of bringing together under the eye, a considerable surface of the country, when minute detail is not required. The reference or terrier exhibiting the names of the owners, the nature, cultivation, and area of each parcel. The valuation consists in recording the terms of leases and sales, as well as the prices current of produce for a period of fifteen years, in order to determine the value and rent of farms, and the average value of each kind of property. To fix by districts, the types and value of each class of cultivation; to apply this classification to each parcel, and register the value in the reference book. The permanency of the survey, that is the keeping it up to the actual state of things, being admitted as a principle, it is necessary to take means to do this so effectually as to avoid the very costly, if not very useful method of revision at distant periods. The means suggested for such a purpose, are by noting in supplementary plans or maps, the change of form or limits of each individual field; the change in the nature of the cultivation; the change of owners and the changes in the value of property, in exceptional cases provided by law. The following rules for making the survey were recommended:—That the triangulation be made according to a general map of the country, if there be one, and if not, that it be commenced by the great triangulation, dividing and subdividing the triangles which it will produce, into smaller triangles, to serve as the basis for the survey. That the valuation be undertaken immediately after the survey. That the valuation be made in such a manner, that the same figures should represent, as nearly as possible, the same value in all the districts, and that the whole valuation should accurately represent the whole revenue of the real property of the country, at the time the survey is made. That the survey may prove the fact of possession, and be accepted as evidence of title. No corrections to be made in the survey unless proved by authentic legal documents.

VII. *Emigration.*—Emigration has of late frustrated the natural course of the law of population, and produced a complete metamorphosis in the position of our working classes. A visitation of providence has on a sudden depopulated portions of the sister island. The boundless wealth of the United States of America, and the wonderful discoveries of gold in California and Australia, have in their turn created such an avidity to emigrate, that the number of emigrants for some years past, has actually exceeded 300,000 per year, and in the ten years ending March, 1851, it amounted to 1,693,516. Emigration is also the natural consequence of social disorganization, political convulsions, and religious excitement. Fanaticism and credulity send thousands to new and distant American settlements. Persecution drives, once more, Protestants and Jews out of Catholic countries. These are the causes of important changes in the resources of countries, and they demand a deep and intelligent consideration; hence the statistics of emigration afford a wide field of instruction. It is, therefore, important that a systematic plan be adopted for the study of these social disturbances, and to this effect registers of emigration should be kept in each town.

The information required with regard to each emigrant, is the name and surname, place and date of birth, sex, age, and condition; religion, profession, and approximate value of the resources or capital at his disposal; the day of departure; the name of the country where he goes to reside; the port of embarkation; the port of debarkation; the known or probable general causes of emigration. In the case of an entire family composed of children and adults, under twenty-one years of age, with no personal property, it will be sufficient to state what amount of capital the father possessed for the maintenance of his family. The individuals who emigrate privately will be registered, with all the information which may be obtained. By means of such information, collected in all countries, general accounts will be made up annually, shewing the causes of emigration, the number of workmen and amount of capital they have taken with them from the mother country. A similar system may be carried out to verify the emigrations. Registries might be established at the ports of embarkation and debarkation, exhibiting first the ports of embarkation, the number of immigrants, men, women and children; the country whence they come, the number, tonnage, and flag of the ships by which they came; the cost of the passage on an average for each destination. And for the ports of debarkation the number of emigrants, men, women and children; the country to which they belonged; the number, tonnage, and flag of the ship by which they came; the number of deaths during the voyage by sex, age and profession, together with the causes of death; the number and sex of sick persons at their arrival; and the condition and probable resources of the emigrants.

VIII. *Agricultural Statistics*.—How far the yearly home produce yielded the necessary amount of food for the growing population of these kingdoms has ever been a subject of anxious speculation, and the source of grievous losses. In the absence of any reliable account of the produce of the crops, the wildest statements circulate freely, and they find sufficient credence to affect the markets, the forerunners of misery and suffering among the masses. Year after year a cry is made for agricultural statistics, but in vain. In Ireland they have been taken by means of the police, but no general system has yet been adopted for England and Scotland. It is to be regretted that the Statistical Congress should have directed their attention merely to the periodical general accounts, rather than to annual returns. However useful it may prove to have periodically a perfect knowledge of the conditions, proceeds, and results of agricultural industry, their value cannot be compared to that of a practical answer to the difficult question, as to the possible quantities of supplies of food to be imported from foreign countries before next harvest. Numerous means are suggested to collect such returns, and it is to be hoped that Government will, without delay, establish a permanent yet simple machinery for such an object. The congress bestowed on the subject of agricultural statistics that attention it demands, and had under consideration the time at which agricultural statistics ought to be taken; the periodicity of such statistics, the instrumentality to be used, and the information to be collected. As to the mode or instrumentality, the congress could only recommend to

use agents faithful and intelligent, so that all the facts may be verified in the same places. What is the most convenient time for the collection of agricultural statistics cannot be laid down. Leaving it to the judgment of the different governments and statistical commissions, the congress could only suggest that the last quarter of the year would be preferable. Nevertheless, it may be objected that the statistics of cattle would be better to be taken in spring. As to the periodicity of such statistics, it should not be at greater intervals than ten years. It is also recommended to form two columns, one giving the results of the year, and the other the average result of the period elapsed between that and the previous accounts. And with respect to the items of information, they should comprise all the conditions, proceeds, and results of the agricultural industry of the country at a given time, and all the facts which may assist towards their proper appreciation in all their different aspects.

IX. *Industrial Statistics.*—Industry is a general term embracing all manner of pursuits. It comprises agriculture, mining, manufactures, commerce, and fisheries. Yet by a conventional application of the term, it is more properly used with respect to manufactures and mining. Of this important element of the prosperity of Great Britain, we possess most meagre accounts. Of the number of mills or factories, number of workmen, amount of produce, and other items, no statistics are collected except for those establishments which come under the supervision of “the Factories Regulation Act,” or of that on the working of mines.

The decided opposition shewn by the manufacturers to any government interference renders it impossible to collect further accounts in this country. The congress recommended the following principal subjects of information:—The number of men, women, and children, under sixteen years, employed in the factories, distinguishing the number of children engaged as apprentices, and the conditions of apprenticeship; the wages, showing the number of workmen who receive average wages, and more or less than the average. It should be stated also whether the workmen receive board and lodging. The statistics of manufactures are divided into two great branches, viz.: Textile Industry, comprising manufactures of hemp, flax, wool, cotton, silks; and Miscellaneous Industry, including, for example, sugar refineries, ship building, &c. For both branches the inquiries should relate to the number of establishments, the mechanical force employed, the number of workmen, and their wages. As to Mining Industry, the information to be collected should relate to combustibles, minerals, and metals, shewing the mines at work; their situation, depth, extent of the bed and qualities, the mechanical instruments used for extraction, number of workmen, average wages, and quantities extracted. The establishments to be classified according to the kind of metal produced or manufactured, such as iron, copper, lead, zinc, &c.; and specifying the principal instruments used for the work, such as furnaces, forges, founderies, &c.

X. *Commercial Statistics.*—Of all statistics the statistics of commerce are subjected to the closest analysis. The merchant governs by them his daily operations; the economist draws from them the great lessons derived from the distribution and interchange

of produce and manufactures. Public finances and foreign exchanges, banking and credit, are all affected by their great totals; and yet there is no branch of statistical operations necessarily more loose, and less to be relied upon. Take our imports and exports: where no *ad valorem* duty is charged on our imports, no entries are required, and simply as a criterion of value, certain prices forming an average of a number of years, are set on all articles of import. This so-called permanent value is only changed every fifty years. Thus the amount of our imports as given officially by the Board of Trade, cannot be taken as a true index of their actual value; and as to the value of our exports, the mode by which it is ascertained is by entries made by shippers at the custom houses. But to these little credit can be attached. Usually the custom house clerk of a mercantile house, is a lad passing his first or second year of apprenticeship. The values are approximately given, unless in cases where the invoices were made up before shipment; and generally they must be far from representing the real value of our exports. Our commercial statistics are defective also in the want of value of our transit trade with the respective countries, and often the amount of articles of transit exceeds that of British produce and manufactures exported to such countries.

Commercial statistics are classified under four heads:—General Commerce, Special Commerce, Transit and Bonding. They are, moreover, divided into imports and exports by land, rivers and canals, and imports and exports by sea. The imports and exports by sea should also distinguish those by national and foreign vessels. The tables ought to specify the countries whence the merchandises are imported, or to which they are exported; the total quantities in weight, measure or number, following as much as possible a common type for the designation of these quantities, and the basis of valuation. The value and quantities ought to be given in units and decimal fractions. There ought to be two columns, one giving the official permanent value, and the other the variable or real value. The value of articles of import ought to be given exclusive of custom or excise duties. The tables should contain also the tariff, and the total amount of duties received. The accounts should always refer to a period of twelve months, and the general or summary tables shew, as much as possible, the corresponding figures for anterior periods.

XI. *Navigation*.—The statistics of navigation are divided into two great branches, Sailing and Steam-vessels: for each of which the accounts should state the number and tonnage of vessels entered and cleared, without distinction of the countries whence they arrive or to which they are going. The number and tonnage of vessels entered and cleared with such indications. The number of vessels entered and cleared according to flag. In all these tables, the general results should exhibit the double distinction of national and foreign vessels, and the number of ships laden and in ballast; and as the basis of calculation for the tonnage is not the same in all countries, it should be stated upon what basis it has been made. The statistics of the mercantile marine, should also exhibit the number, kind, and tonnage of vessels belonging to each country, of vessels constructed, and vessels naturalized during the year. The

number of vessels lost, sold abroad, or broken up. The number of seamen enrolled each year, distinguishing national and foreign seamen. The Congress recommended that in the statistical tables of countries not possessing the metrical system, a column should be added indicating the metrical reductions of weights and measures. And also that the government shall not limit their endeavours to the collecting statistics of foreign trade, but that they should collect every account which may be conducive to a correct estimate of the home trade. The Central Statistical Commission of Belgium was also recommended to prepare, before the meeting of the next congress, a report of all the statistical tables of commerce published in the different countries, shewing their dissimilarities, both in their forms and in their contents.

XII. *Economical Budgets.*—In order to appreciate the bearings of a subject of statistics so novel and important, some preliminary observations are necessary. The question itself originated in London, during the Great Exhibition of 1851, when a number of statisticians from different countries met together, and it was mainly due to the energy of our late Honorary Secretary the learned Mr. Fletcher, that the subject assumed a tangible form. The object of the inquiry is to arrive at a clearer knowledge of the resources of the working classes. It is not an attempt to prescribe or circumscribe the expenditure of individuals, making budgets of families as the budgets of provinces, but simply to organize into a system, all those desultory inquiries which are constantly made into the state of the working classes. It is not to be expected that a question of such a character can by any means be reduced into a definite form, or into an absolute certainty; but any advance made into the discovery of the great arcana of the human family, the great question of the means of subsistence of the masses will be of great public benefit. The question was introduced to the Congress in a most eloquent address by M. Visschers, which concluded with the following observations:

“Ainsi, Messieurs, en généralisant l'étude de cette question dans différents pays, on pourra approfondir tout ce qui concerne les classes laborieuses; mais en même temps on étudiera les effets des différences physiques du sol et du climat, ou de celles qui proviennent des institutions; quels sont les effets de la grande propriété ou du morcellement des terres, du développement de l'état industriel ou commercial, ou des occupations purement agricoles. Nous verrons si avec confiance et comme les yeux fermés on peut accepter la croyance, que les classes inférieures, abandonnées à elles-mêmes, peuvent toujours suffire à leur besoins.

“En repoussant une intervention exagérée de l'action sociale dans ce qui concerne les intérêts des individus, nous verrons si l'on n'a pas trop laissé jusqu'ici dans l'oubli les classes ouvrières, surtout celles qui peuvent souffrir. Tandis que certaines écoles ont montré peut-être une indifférence trop grande à l'égard de ces classes, d'autres ont produit des systèmes dangereux. Il nous faut rechercher la vérité. A ceux que leur cœur ne porterait pas à s'occuper de ces questions je répondrais par leur intérêt. Cet examen est nécessaire, peut-être même urgent. *Jam proximus ardet Ucalegon!*”

The budgets of the working classes comprise three kinds of ex-

penditure, 1st. Expenditure of a physical and material character; 2nd. Religious, moral, and intellectual; 3rd. Luxuries and vices. The first includes nourishment, such as bread, vegetables, meat, milk, butter, spices, tea, coffee, and beer, habitation, clothing, sleeping apartments, wood or coals, light, washing, means for the preservation of health, baths, repairs of houses, insurances, purchase of furniture, taxes, postages, expenses incident to their occupation or accruing from the keeping of a garden attached to the house. The second class includes church expenses, school for children, apprenticeship, purchase of books, subscriptions for moral, charitable, and intellectual purposes, subscriptions to friendly societies, savings' banks. The third class includes expenses at the coffee houses and public houses, drinking, snuff, gambling, lotteries, ornaments of toilette, theatres, public festivals, loans, and pledges. With a view to compare the results of such information, it is suggested to prepare the budgets of three families, composed each of father, mother, and four children, of sixteen, twelve, six, and two years respectively, for each great division of the country, or for such portion as may be the object of study, distinguishing agricultural labourers and other kinds of workmen. The budgets will have reference to a family of poor labourers maintained partially at the public expense; a family of labourers not comfortably situated, yet not under public charity; and, thirdly, a family of labourers comfortably off and quite independent. Such budgets should exhibit the incomes as well as expenditure. The incomes include the wages of the head of the family, mother, and children, counting the average number of days they are at work, the number of holidays, and bad times in the year. The other sources of incomes will be those arising from a garden or parcel of land, rent of a house or of a field, produce of pasture, of a pig, a goat, &c., enjoyment of public property, pensions, funds, interests, miscellaneous produce, and eventual income.

As the Central Statistical Commission of Belgium has drawn up a number of queries on the subject which have already been largely circulated throughout Belgium, it was recommended that other Governments should institute similar inquiries on the plan suggested.

XIII. Statistics of Indigence or Pauperism.—The statistics of indigents, or those in a state of actual privation of the necessities of life, not of those comparatively poor, should be collected by departments in country places, by households or families, and by individuals, (men, women, and children below sixteen years,) distinguishing those who are accidentally or temporarily assisted, and those who are assisted continually and permanently. It should also be ascertained, as much as possible, the number of persons receiving assistance from private institutions, either exclusively or together with public charities; and a periodical revision should be made of the documents, registers, lists, &c., on which the poor are enrolled, distinguishing the ages and sexes. The principal and essential causes of poverty should be ascertained, such as old age, sickness, infirmities, widowhood, loss, or abandonment by parents, numerous family, want of work, insufficiency of wages, or other involuntary causes; or bad conduct, idleness, intemperance, dishonesty, or other voluntary causes. Information should be col-

lected of the number and nature of charitable institutions of different kinds, exhibiting the number of poor persons whom they assist at a time, or the character, causes, and effects of pauperism, number of mendicants, vagabonds, and abandoned poor without any legal domicile; valuation of the public charities, and of the help afforded to the poor, distinguishing those that are assisted in their own houses, and those assisted in the establishments, or in-door and out-door relief; the number of provident institutions for the object of alleviating or preventing poverty.

XIV. *Educational Statistics.*—Educational establishments are divided into four classes—1st. Those applied to elementary teaching or infant schools, including sunday schools, schools for the blind and deaf and dumb, charitable schools, orphan schools, &c.; 2nd. Middle schools, including athenæums, lyceums, industrial and commercial schools, schools of agriculture, schools of navigation, &c.; 3rd. Superior schools, such as universities, schools of mines, engineering, &c.; 4th. Those applied to special branches of education or science, such as religion, schools of design, gymnasium, military, &c.

The statistics of education should include, for each class, the number and nature of establishments, showing the subject of instruction, the method, the language in which teaching is conveyed, the religious character, &c; the number of masters, instructors, and professors; the number of students, distinguishing the sexes and ages; the maintenance and emolument of instructors and professors; the administration and inspection; the accessory institutions intended to complete the courses of instruction, such as conferences, libraries, museums, examinations, &c.; the income and expenditure, specifying the amount of fees from students; the amount of state or of charitable endowment; and the expenses of management, and inspection, and teachers. Other subjects of information are also recommended, such as may show how education and instruction are combined in the various stages; the special provisions made for the education and instruction of children of the agricultural labourers, working classes in the cities, and the poorer classes whose education is given gratuitously, and where it is obligatory on the part of the children to attend, what rewards are afforded or compulsory means used; distinguish in establishments and schools of the first class the general attendance in summer and winter; ascertain, as much as possible, the results of the various systems of education, and compare their value; give the examinations, degrees, and diplomas generally granted; the state of education among young men in the military service, and among prisoners, and also the number of signatures in marriages; and, lastly, indicate such circumstances as may, favourably or unfavourably, affect such results.

XV. *Criminal Statistics.*—Criminal statistics embrace principally the number of offences and of commitments, the nature of crimes, the means used for their prosecution and repression, and the penalties inflicted. The Congress recommended to establish, as the basis of criminal statistics, the nomenclature of all the offences which come under cognizance of the general code or special laws of any country rather than general classifications. To add to the statistical tables detailed explanations of the criminal legislation of the country, prin-

cipally upon the meaning attached by the penal law to the qualifications, differences, and degrees of culpability. To invite the jurists, and, above all, the criminalists of different countries, to draw up, according to the penal law of their respective countries, a table as detailed as possible of the crimes, offences, &c., with explanations of their nature, with a view to form the basis and prepare the elements for a more general classification applicable to all countries.

The statistics of crime should exhibit the number of offences under cognizance of the law; number of offences which, owing to any cause, have not been prosecuted, and the number of those which were prosecuted and of the persons committed, by sex and age, by years up to 21 years of age, and by ten years from 21 to 30 and upwards; number of persons discharged and condemned, with the same distinctions; the penalties inflicted, by a nomenclature as minute as possible; number of capital punishments, detentions, transportations, fines, &c., indicating especially the number of executions, the durations of the penalties, whether for perpetuity, for more than 10 years, 10 to 5, 5 to 3, 3 to 1 years, 1 year and under; that of transportations, and the amount of fines; number of individuals imprisoned for any cause whatever; duration of detentions; number of discharges with or without bail; duration of the trial; number of persons condemned, by sex and age, distinguishing those who have been submitted to another trial. To these general statements there should be added the origin, domicile, condition, profession, and extent of education of the criminal, the causes known or presumed of the crime, the attenuating circumstances, the trials by defaults, mode of procedure and judgment; indicating each phase of the trial, the appeals, and the exercise of grace and pardon.

XVI. *Proceedings of Congress.*—The statistical subjects proposed for discussion being exhausted, the attention of the Congress was directed to two important questions, eminently calculated to promote the social and commercial relations between different countries. The first was the adoption of a system of international postage; the second the extension of international commercial law. The proposed national and international code of commercial law has lately received considerable impulse and a practical tendency.* The Congress passed a resolution expressing a hope, 1st. That the recent postal reforms of different countries would be introduced into the international postal relations; 2nd. That the great differences now existing in the commercial legislation of different countries may be diminished and even removed altogether. Another important wish was expressed, that special and detailed statistics be obtained for all large cities. The Central Statistical Commission of Belgium were then intrusted to select a place, and fix a time, for the future

* A Royal Commission was lately issued to consider the expediency of assimilating the mercantile laws of the United Kingdom, and I trust the consolidation of these will be followed by a gradual extension of the system to the colonies and dependencies. The resolution passed at the Brussels Congress is so far a recognition of the importance of removing the differences which exist in the commercial legislation of different countries. Arrangements are now in progress for a special conference on commercial laws and regulations of deputies from the Chambers and Tribunals of Commerce and other legal and commercial bodies of the chief commercial towns of Europe and America.

meeting of Congress, making it known at least six months before the time. Lastly, on the motion of Lord Ebrington, a vote of thanks was passed by acclamation to the president, and after the delivery of a short address by the president, the Congress closed on Thursday the 2nd of September. Thus terminated these most important proceedings. The Congress sat four days, the sections sitting between 9 and 12, and the Congress from 2 to 4 o'clock each day. The Central Statistical Commission, the Minister of the Interior, M. Quetelet, and M. Ducpetiaux, were sumptuous in their liberalities and hospitalities, towards those who attended the Congress. The king, the Duke de Brabant, and the Comte de Flandres, with several officers, honoured the Congress with their presence, and invited a great number of the members to a banquet at the palace. The clubs and other public institutions were opened to the members, and a statistical dinner, attended by all the members of the Congress, and by the Ministers of the Interior, Finances and Justice, contributed to render the whole a most social and brilliant entertainment. Thus the interests of statistical science were extensively promoted, whilst the representatives of twenty-six states, and a large number of scientific individuals from all countries, were united for the common object of establishing the basis upon which the true economy of nations may be founded.

XVII. *The Statistical Society of London.*—The important proceedings of such a congress upon such numerous and comprehensive subjects cannot fail to awaken the deep interest of the Statistical Society of London. Zealous for the promotion of statistical science, it will hail with delight the progress secured by so successful an event. But its results impose on all governments and statistical societies, responsible duties. To give effect to the wise suggestions of the Congress, in so far at least as it is practicable, or indeed desirable, in this country, is what is now most essential. According to the different forms of government, the instrumentalities employed must vary. In this country where voluntary associations assume a large share of public functions, much is generally required of them. It is, therefore, from the Statistical Society of London, that the Belgian Commission may receive invaluable co-operation. Placed in the centre of the metropolis of the commerce of the world, it should be the depositary of the statistical information from all countries, and as the accounts published by the departments of our public administration are wanting in unity and system, the society might form the centre wherein they may be collected and digested, and from which they may be transmitted to other countries. The society may therefore enter into a new era of usefulness. Let it exercise its accustomed energy, its acknowledged eminence, and its abundant resources.

Brussels had the honour of being the first to hold a congress of an important and practical character. It is reserved for the London Statistical Society to invite the succeeding congress to be holden within this vast metropolis, and under its own auspices.

On the Duration of Life among Medical Men. By WILLIAM A. GUY M.B., Cantab.; Fellow of the Royal College of Physicians; Professor of Forensic Medicine, King's College; Physician to King's College Hospital; Honorary Secretary to the Statistical Society; &c.

[Read before the Statistical Society of London, 19th December, 1853.]

THE present communication is the second of a series of papers on the Duration of Life among the Members of the several Professions. The first paper of the series, "On the Duration of Life among the Clergy," was read at the November Meeting of this Society, in the year 1851, and was published in the December number of the Journal of the Society for the same year. An essay "On the Duration of Life in the Members of the several Professions," founded mainly upon facts gleaned from the "Annual Register," had been previously submitted to the Statistical Section of the British Association for the Advancement of Science, in September, 1846, and was published in the December number of the Society's Journal for the same year. This Essay embodied a table showing the average age at death in 260 members of the medical profession, which table was compared with the results obtained by Professor Casper, of Berlin. I shall presently have occasion to revert to these results. I may also, in this place, remind the Society of the valuable contribution which was made by my able colleague, Mr. Neison, to the department of medical statistics of which this paper treats, in his essay "On the Rate of Mortality in the Medical Profession," read before this Society on the 15th of March, 1852, and published in the September number of the Journal of the Society.

The facts which have been employed in obtaining the average results contained in this communication are:—

1. The ages at death of such English medical men, chiefly physicians and surgeons, as had by their writings and high professional reputation secured for themselves a place in the pages of "Chalmers' Biographical Dictionary."

2. The ages at death of such English medical men, (also chiefly physicians and surgeons,) as have found a place in the less select obituaries of the "Annual Register," from 1758 to 1813; and

3. The ages at death of English medical men, (chiefly physicians and surgeons,) recorded in the pages of the "Biographical Dictionary" up to the year 1815, added to the ages at death recorded in the obituaries of the "Annual Register" from that date up to the year 1852, inclusive. The object of combining the facts derived from these two sources was to bring the data down to the latest period, as well as to increase the number of individual facts from which the average results were to be deduced.

It is necessary to premise, in reference to all these orders of facts, that in this, as in former and in future essays, all deaths by violence, accident, or suicide, are excluded. It should also be borne in mind that the average results are deduced from the ages at death alone, the element of the ages of the living communities among whom the deaths took place being wanting.

TABLE I.

Age.	Biographical Dictionary.	Annual Register, 1768-1843.	B. D. and A. R. to 1832.	Age.	Biographical Dictionary.	Annual Register, 1768-1843.	B. D. and A. R. to 1832.	Age.	Biographical Dictionary.	Annual Register, 1768-1843.	B. D. and A. R. to 1832.
26	...	1	1	51	1	2	4	76	3	10	17
27	...	1	1	52	5	1	7	77	5	3	12
28	...	5	2	53	3	2	8	78	2	11	6
29	...	...	1	54	3	2	4	79	5	2	7
30	...	6	2	55	2	5	6	80	7	9	13
31	...	1	1	56	1	4	4	81	4	2	6
32	1	2	2	57	2	5	5	82	3	11	13
33	...	2	1	58	3	5	8	83	5	5	11
34	...	2	3	59	6	1	7	84	4	6	8
35	1	2	5	60	1	4	8	85	3	6	5
36	1	...	3	61	3	2	5	86	4	2	3
37	1	3	2	62	2	3	3	87	2	1	3
38	2	1	3	63	10	5	14	88	3	2	7
39	...	4	1	64	7	8	15	89	1	2	1
40	3	4	7	65	4	5	11	90	1	2	3
41	2	1	5	66	2	10	12	91	1	...	1
42	1	3	3	67	3	3	12	92	1	2	2
43	2	3	7	68	6	10	13	93	...	...	...
44	1	1	2	69	3	5	10	94	...	1	1
45	2	3	2	70	3	4	6	95	...	...	...
46	1	4	3	71	5	5	13	96	...	2	...
47	1	1	4	72	11	6	13	97	...	1	1
48	1	4	7	73	2	4	7	98	...	...	...
49	2	4	3	74	3	7	10	99	...	...	...
50	...	2	2	75	6	11	12	100 & upwds.	...	1*	1†

* One of 100 years.

† One of 106 years.

The preceding table will be found to embody, arranged under the three distinct heads just indicated, the individual facts from which the averages of the subsequent tables are derived.

The differences which exist between these three columns of figures are such as might have been expected. The first column, which comprises the ages at death extracted from "Chalmers' Biographical Dictionary," exhibits very few deaths at very early or at very advanced ages, in comparison with the deaths at the corresponding ages contained in the second and third columns. The small number of deaths at the early ages to be found in the pages of the "Biographical Dictionary," was to be expected when we bear in mind how rarely literary or scientific eminence is achieved before the middle period of life; while, on the other hand, the greater number of deaths occurring at the more advanced periods in the column headed "Annual Register," and in the mixed column containing facts from the "Biographical Dictionary," with facts from the later volumes of the "Annual Register," is readily explained by an observation contained in the essay "On the Duration of Life among the Clergy," namely, that the short biographical notices contained in the obituaries of the "Annual Register" will naturally comprise "instances of great longevity, introduced as items of interesting intelligence."

The figures contained in Table I. have supplied the materials for Tables II. and III., which exhibit, for periods of five and ten years respectively, the number and per-centage proportion of deaths under each of the heads already specified; that is to say, the "Biographical Dictionary," the "Annual Register," and the two works combined.

TABLE II.

Age.	Biographical Dictionary.	Annual Register.	B. D. and A. R.	Per-Centage Proportion.		
				Biographical Dictionary.	Annual Register.	B. D. and A. R.
26—30 ....	....	13	7	....	5·06	1·69
31—35	3	9	12	1·72	3·50	2·90
36—40	7	12	16	4·02	4·67	3·83
41—45	8	11	19	4·60	4·29	4·72
46—50	5	11	19	2·87	4·29	4·72
51—55	14	12	29	8·04	4·67	7·00
56—60	13	19	32	7·47	7·39	7·66
61—65	26	23	48	14·94	8·95	11·49
66—70	17	32	53	9·77	12·45	12·77
71—75	27	33	55	15·52	12·87	13·25
76—80	22	35	55	12·64	13·62	13·25
81—85	19	30	43	10·92	11·67	10·36
86—90	11	9	19	6·32	3·50	4·72
91—95	2	4	6	1·15	1·56	1·45
96—100 & } upwards }	....	4	2	....	1·56	0·48

TABLE III.

Age.	Biographical Dictionary.	Annual Register.	B. D. and A. R.	Per-Centage Proportion.		
				Biographical Dictionary.	Annual Register.	B. D. and A. R.
26— 30 ....	....	13	7	....	5·06	1·69
31— 40	10	21	28	5·75	8·17	6·73
41— 50	13	22	38	7·47	8·58	9·44
51— 60	27	31	61	15·51	12·06	14·66
61— 70	43	55	101	24·71	21·40	24·26
71— 80	49	68	110	28·16	26·49	26·50
81— 90	30	39	62	17·24	15·17	15·08
91—100 & } upwards }	2	8	8	1·15	3·12	1·93

The following table shows the average age attained by such medical men belonging to the three classes as had reached the several specified ages. A similar table is given in the Essay "On the Duration of Life among the Clergy," as well as in former essays.

TABLE IV.

Age.	Biographical Dictionary.	Annual Register.	B. D. and A. R.
26 and upwards	67·04	65·36	65·45
31 "	67·04	67·31	66·09
41 "	68·87	70·23	68·27
51 "	70·94	72·95	70·80

Having now presented the facts which I have collected in illustration of the Duration of Life among Medical Men, in tabular forms, admitting of comparison with similar tables employed in illustrating the Duration of Life among the Clergy, I proceed to compare the results obtained, first with other facts bearing on the duration of life of members of the same profession, and secondly, with the duration of life among the clergy.

I have already referred, in the essay "On the Duration of Life in the Members of the several Professions," to the results obtained by Professor Casper, of Berlin. The ages at death on which those results are founded are the ages of medical men described as "*Médecins*." The results do not admit of exact comparison with those contained in the foregoing tables, because the *status* of the class described by him as *Médecins* differs from that of pure physicians and surgeons whose histories are to be found in the pages of the "Biographical Dictionary," or shorter notices of whose lives are contained in the obituaries of the "Annual Register." It is true that the exclusion from Casper's tables of anatomists, veterinary surgeons, naturalists, and medical men engaged solely in literary pursuits, leaves

a residue which may be fairly taken to represent the class of medical men properly so called, and which, with the explanations now given, may be brought into comparison with English physicians and surgeons. This comparison is made in the following table, in which I have thought it sufficient to place side by side the results obtained from the "Biographical Dictionary," and those deduced from Casper's facts.

TABLE V.

Age.	Biographical Dictionary. (English Physicians and Surgeons.)	Casper. (German "Médécins.")
26 and upwards	67·04	58·00
31 " 	67·04	59·27
41 " 	68·87	63·82
51 " 	70·94	68·21

It will be seen from this table that whatever age we make the starting-point of our calculations, the English physicians and surgeons have an advantage in the duration of life over German "*Médécins*;"—an advantage which will be seen to be still greater if we substitute the results obtained from the "Annual Register" for those derived from the "Biographical Dictionary."

In comparing the duration of life among members of the medical profession with the duration of life among the clergy, two orders of facts are available—those gleaned from the "Annual Register" from 1758 to 1843, and those obtained from the "Biographical Dictionary." The ages at death collected from the obituaries of the "Annual Register" are, for clergymen, 963 in number; for medical men, 260 in number; those from the pages of the "Biographical Dictionary" are, of clergymen, 909; of medical men, 174. The following table shows the average results obtained in the two cases:—

TABLE VI.

Age.	Annual Register.		Difference.	Biographical Dictionary.		Difference.
	Clergy.	Medical Men.		Clergy.	Medical Men.	
26 and upwards	68·81	65·36	3·45	66·13	67·04	0·91
31 "	69·49	67·31	2·18	66·42	67·04	0·62
41 "	71·82	70·23	1·59	67·60	68·87	1·27
51 "	74·04	72·95	1·09	69·48	70·94	1·46

It will be seen by this table that while the ages at death, extracted from the "Annual Register," yield average results favourable to the clergy, those extracted from the "Biographical Dictionary" afford averages almost equally favourable to the medical profession. If we might safely assume that the number of facts is sufficient to obtain true averages, it would not, perhaps, be unreasonable to explain the favourable result to the clergy, in the case of the facts obtained from

the "Annual Register," to the large proportion of the clergy resident in the country, and the healthy influence of rural habits and pursuits. In the case of the facts gleaned from the pages of the "Biographical Dictionary," the comparison is more exact, and there would be little or no difference in the modes of life of the members of the two professions, except, perhaps, that the lives of the members of the medical profession, who achieve such an amount of distinction as entitles their names to a place in a select Biographical Dictionary, are likely to be more active than those of clergymen, whose claim to distinction is founded chiefly upon literary labours, entailing more sedentary habits.

One of the questions examined in my essay "On the Duration of Life among the Clergy," was the duration of life of clergymen born in different centuries. I now propose to extend this inquiry to the members of the medical profession, and to compare the results the one with the other, as well as to show the results for the aggregate of the two professions. This is done in the following table, which, it must be borne in mind, is based exclusively on the facts obtained from "Chalmers' Biographical Dictionary."

TABLE VII.

	Clergy.		Medical Men.		Clergy and Medical Men.	
	Number of Deaths.	Mean Age.	Number of Deaths.	Mean Age.	Number of Deaths.	Mean Age.
7th century	1	63·00	....	....	1	63·00
11th "	3	73·33	....	....	3	73·33
12th "	4	72·25	....	....	4	72·25
13th "	1	52·00	....	....	1	52·00
14th "	5	67·40	....	....	5	67·40
15th "	18	68·78	1	63·00	19	68·47
16th "	258	66·86	21	64·62	279	66·69
17th "	426	66·41	70	66·95	496	66·49
18th "	193	66·78	82	67·80	275	67·09

In this table the figures which represent the average duration of human life in members of the medical profession differ from those which represent the duration of life among the clergy, inasmuch as they do not show any tendency to a shortening of human life in the case of medical men born during the 17th century. On the contrary, such a tendency does manifest itself not only among the clergy, but in the aggregate of the two professions.

One other comparison instituted in the essay "On the Duration of Life among the Clergy," and which it is proposed to repeat in this and in future essays, is between the married and the single members of the profession. Though the fact of the subjects of the medical biographies having been unmarried is distinctly stated in three instances only, I have thought it worth while to add these instances, contrasted with those in which the subjects of the biographies are stated to have been married, to the small number of facts already collected in the case of the clergy. By following the same course in respect of the other professions, a sufficient number of facts may ulti-

mately be brought together to determine the influence on longevity of married and single life respectively.

TABLE VIII.

	Clergy.			Medical Men.			Clergy and Medical Men.		
	Number of Deaths.	Mean Age.	Greatest Age.	Number of Deaths.	Mean Age.	Greatest Age.	Number of Deaths.	Mean Age.	Greatest Age.
Married	370	68·65	100	75	69·17	92	445	68·74	100
Single	31	63·13	84	3	70·33	75	34	63·77	84
Difference	....	5·52	16	....	1·16	17	....	4·97	16

As these three ages at death, of unmarried medical men, yield a higher average than the ages at death of the seventy-five married men, the consequence of the addition of these new facts to those of the former essay is, to reduce considerably the difference between the gross average results for the two classes. The difference, however, in favour of the married members of the two professions, as shown by the third column, is very nearly five years.

It should be borne in mind that all the numerical results embodied in the preceding tables refer, with few exceptions, to physicians and surgeons. The number of general practitioners and of surgeons in the army or navy, or in the East India Company's service, is so small as not to affect the results in any appreciable degree. Being unwilling to bring this communication to a close without instituting some comparison between the duration of life of the several distinct bodies of medical practitioners which make up the medical profession, I have sought for the materials for such a comparison in the obituaries published in the "London and Provincial Medical Directory." From the six volumes of that work, for 1848 to 1853 inclusive, I have been able to obtain the ages at death of 482 medical men, of whom 261 were engaged in general practice, 148 were physicians or pure surgeons, and 73 in the public service of the army, navy, or East India Company. The average results are shown in the following table:—

TABLE IX.

	General Practitioners.	Physicians and Surgeons.	Army and Navy.
All ages	52·27	61·13	58·52
26 and upwards	53·27	61·13	60·00
31 ,,	54·98	62·53	62·43
41 ,,	62·32	66·19	68·07
51 ,,	68·10	70·52	71·00
Greatest Age	94	92	91

It is but natural to expect that a class of men exposed to so much fatigue, harassed by calls for professional services at all hours of the day and night, and often in prolonged attendance among those classes of the community with whom contagious maladies are most rife, should have their lives shortened when compared with the other members of the same profession. That the increased exposure to contagious maladies of the class of general practitioners, is a real and not an imaginary cause of danger, the following comparison, which extends to deaths at unknown ages, as well as to those in which the ages are specified, will demonstrate.

Out of 348 deaths occurring among general practitioners of all ages, 15 were due to fever, 5 to cholera, 5 to wounds in dissection or during operations, 1 to erysipelas, and 1 to scarlet fever; making a total of 27 deaths from exposure to sources of danger from some of which the members of other professions are entirely free, while they are partially exempt from the remainder; or, as nearly as possible, 1 death in 13.

Out of 233 deaths occurring among physicians and surgeons of all ages, there were 7 from fever, 6 from cholera, and 1 from small pox; making a total of 14 deaths from similar exposure to peculiar sources of danger; or, as nearly as possible, 1 death in 16.

Out of 117 deaths occurring among medical men engaged in the several branches of the public service, 2 are attributed to fever, 3 to cholera, and 2 to yellow fever; making a total of 7 deaths, or 1 in about 17.

The difference between 1 in 13 and 1 in 16 is sufficiently large to account for a part of the disparity which appears in the duration of life of the general practitioners and of the physicians and surgeons.

The deaths from fever in the three classes bear to deaths from all causes the respective proportions of 1 to 23, 1 to 33, and 1 to 58.

This proportion of 1 to 33, in the case of physicians and surgeons deceased within the last few years is lower than the proportion of deaths from fever recorded in the "Biographical Dictionary," for out of 175 deaths due to all causes, of which 54 are specified, no less than 9 deaths, or 1 in 19, are attributed to fever.

It must not, however, be supposed that the proportion of 1 to 33, or of 1 to 19 represents the special risk to which the members of the medical profession are exposed in the exercise of their calling: on the contrary, every man's experience must convince him that fatal cases of fever are constantly occurring among the members of other professions. In the last great epidemic of fever, in 1846—1847, for example, instances of mortality from fever among the clergy of different denominations officiating in our large towns were recorded contemporaneously with a high mortality from the same cause among medical men, relieving-officers, and others brought into frequent contact with the poorest classes. There is reason to believe, however, that the deaths from fever among medical men, and especially among general practitioners, would be found to be in excess above those occurring among clergymen and other professional persons, or among men in the same rank of life. The "Biographical Dictionary" furnishes some evidence in support of this opinion; for while, as has been already stated, the proportion of deaths from fever to deaths

from all causes is 1 in 19 in the class of physicians and surgeons, it is only 1 in 57 for clergymen, and 1 in 28 for lawyers. The mortality from fever in several classes of persons, including those just specified, is represented by the following proportions:—

TABLE X.

Profession.	Deaths from Fever.	Deaths from all Causes.	Proportion.
Clergy	16	909	1 in 57
Statesmen	2	80	1 „ 40
Miscellaneous Writers.....	12	358	1 „ 29
Lawyers	5	139	1 „ 28
Antiquarians	4	106	1 „ 26
Artists	3	76	1 „ 25
Physicians and Surgeons	9	175	1 „ 19
Poets	13	200	1 „ 15
Mathematicians and Astronomers	6	69	1 „ 11

This comparison is instituted, not to establish the exact proportion of deaths by fever among the several classes of persons specified, (for the notices contained in the “Biographical Dictionary” are not sufficiently accurate for such a purpose,) but only to show that while, on the one hand, the mortality from fever is high in the medical profession when compared to other professions, it is only, on the other hand, a part of that higher mortality which is attributable to peculiar professional causes. The subject of the risk from fever to which the members of the several professions, and persons following different occupations are exposed, is one which would repay a laborious compilation from the records of the Registrar General.

The facts contained in this essay, after due allowance has been made for the omission of the ages of the living, and the comparatively small number of recorded deaths, will probably justify the following general conclusions:—

1. That the duration of life is greater among physicians and surgeons than among the general practitioners of medicine and surgery.

2. That this greater longevity of physicians and surgeons is only in part explained by a less amount of exposure to contagious diseases and other professional risks.

3. That the duration of life of members of the medical profession, (being chiefly physicians and surgeons,) does not differ materially from the duration of life of the clergy, being somewhat less when the comparison is made between the less distinguished members of the medical profession and the clergy whose deaths are recorded in the same obituaries, and somewhat greater when the comparison is limited to the more distinguished members of the two professions.

4. That the duration of life of medical men has somewhat increased during the last three centuries.

Statistics of Portsea and Portsmouth Dockyard.

[The following are the observations on Lady Bentham's letter, referred to in the foot note at p. 350, vol. xvi., as having been forwarded by the Secretary of the Portsmouth and Portsea Literary and Philosophical Society, from John Fincham, Esq., late Master Shipwright of Her Majesty's Dockyard, but omitted from want of space.]

As the Portsmouth and Portsea Literary and Philosophical Society has been pleased to refer to me a paper written by Lady Bentham, and read before the Statistical Section of the British Association on the 13th of September last, with a view to my furnishing any remarks in answer thereto, I beg to allude to the following facts which have led to the production of the paper in question by Lady Bentham.

You are aware that when I had the honour to be the President of that Society the Committee was pleased to entrust to me the task of preparing a Statistical Report of the Government Establishments here, to constitute a part of the Society's general report on the "Statistics of the Island of Portsea." The difficulty of obtaining exact information to the extent required in the departments with which I was not immediately connected, obliged me ultimately to confine my attention to the statistics of the dockyard. The extremely voluminous character of official correspondence and documentary information from which alone many historical facts of interest could be gleaned, coupled with the small amount of time which could be devoted to that undertaking, obliged me also to restrict myself to *selections* from those documents. These conditions gave a character of incompleteness to my paper which I had no means of avoiding.

It appears, moreover, that an inaccuracy was fallen into regarding the time at which an increase was made in the salaries of dockyard officers in the place of certain perquisites, including apprentices with premiums, which had before been allowed to them. This has been pointed out by Lady Bentham in the paper already referred to.

Her ladyship, further, in that paper, enters with laudable enthusiasm into a discussion of the part taken by her late husband, Brigadier General Sir Samuel Bentham, in the various forms of improvement effected in Portsmouth dockyard about the close of the last and beginning of the present century. It is probable that the details of information on this subject were accessible exclusively to Lady Bentham and the persons at the Board of Admiralty, as he, being the chief officer in a distinct department, corresponded immediately with the Board, which accounts for the fact that copies of his letters were not found in the dockyard books, whilst copies of letters relating to his proceedings, addressed by the Admiralty to the Resident Commissioner of the dockyard, were often met with. Copies of all the official correspondence of Sir Samuel Bentham having been retained in his own possession, remained, as it appears, after his

death, along with his private papers, in the hands of his widow. Thus it is that Lady Bentham is acquainted with many facts of the dockyard with which the officers of that establishment have no means of informing themselves.

There is one part of the paper I furnished which Lady Bentham considers unfair towards her late husband; it is as to the respective parts taken by him and by the late Sir Isambert Brunel in the contrivance of the block machinery. I never before heard or saw Sir Isambert's merit in this respect disputed: and on an occasion of his visiting Chatham dockyard, a few years ago, whilst I was there, he dined with me; and at that time the conversation turned, amongst other subjects, upon the block machinery,—and the tenor of his remarks was such as to lead any one not acquainted with the authorship of the machinery to suppose it was his own. The fact of his having received the entire pecuniary compensation was also presumptive evidence of his being the author of the contrivance.

Again, in my "History of Naval Architecture," I stated, after having collected information, as I believed, from the most reliable sources, that "amongst the improvements in the dockyards at the close of the last and the commencement of the present century, that which showed the most remarkable force of genius was the invention and employment of the block machinery at Portsmouth; this has always been regarded and admired as one of the most refined and useful applications of mechanical art in the service. The model for this machinery was made by Mr. (since Sir Isambert) Brunel, and, on its being brought under the notice of the Lords Commissioners of the Admiralty, it was referred to General Bentham. He at once saw the merits of the invention, and, without hesitation, recommended it to the Government as a means by which blocks could be made with the greatest accuracy and uniformity, at the same time that the expense would be reduced in a very great degree. Upon this recommendation Mr. Brunel's machinery was ordered to be constructed; it was therefore taken in hand in 1802, and completed in 1808, and Mr. Brunel received, as a compensation for his invention, 20,000*l.*, a sum which was then considered to be one year's saving, and an equivalent for his time and labour during the erection of the machinery."—pp. 128-9. The execution of the machinery was entrusted to Messrs. Maudslay, to whose ingenuity and ability much of the efficiency of the detail was understood to be due.

Shortly after the publication of that work I presented a copy of it to Lady Bentham; and in acknowledging that little mark of attention, her Ladyship stated that she turned at once to those parts of the book in which her late husband's labours had been noticed. But she never intimated that the merit of the contrivance in question belonged in any way to him.

The person who furnished to the "Encyclopædia Britannica" the article on the Block Machinery, wrote it under the impression that the design originated with Mr. Brunel. Thus, until the present time, all the evidence that had come to my knowledge was in favour of Mr. Brunel's authorship of the plan; and, indeed, Lady Bentham herself admits that he had a small working model, which was "exhibited to the Admiralty." But as to his having constructed this in

conformity to General Bentham's specification, nothing, so far as I am aware, had transpired until now.

I never entertained the shadow of a motive to do injustice to the claims of Sir Samuel Bentham. I believe he deserved far more of his country than was ever accorded to him; and that the greatest disadvantage he was under in getting due attention to many of his enlightened views, in regard to both mechanical appliances and the economy of carrying on public duties, consisted in his having appeared before the public mind was prepared to appreciate them,—when official prejudice was strong,—and when questions regarding the public interest and national establishments were not matters of the same free discussion that they are at the present time. And I consider it is most honourable to Lady Bentham, at her advanced age, to enter so fully and ably as she does into the discussion of public questions, in vindication of the claims of her late husband, whose merits were never generally appreciated in his lifetime.

Only one other question discussed in Lady Bentham's paper remains to be noticed. She says: "In a statistical account of Portsea the metal mills in the dockyard should not be omitted." This branch of manufacture was removed from Portsmouth to Chatham dockyard several years ago, to make room for the erection of the steam factory. Its value, indeed, was such, that if it had remained the omission would not have been excusable; but its removal having taken place a considerable time before the paper in question was prepared, it seems that no further reason needs to be stated for omitting to notice it. I had, in my "History of Naval Architecture," mentioned the metal mills as a part of Sir Samuel Bentham's plan of dockyard improvements, and stated the annual saving of which it was the means, to have been about 41,000*l.*, whilst Lady Bentham states the exact amount to have been 40,954*l.* 12*s.* 8*d.* But that which gave the greatest value to the metal mills was the superiority of the copper sheathing manufactured there, under the immediate charge of Mr. Vernon, who was brought into the service by General Bentham, an excellence which had not been realized before, nor has it been since his time.

Highland House, Landport,
28TH OCTOBER, 1853.

Contribution to the Natural History of the New Zealand Race of Men; being observations on their Stature, Weight, Size of Chest, and Physical Strength. By A. S. THOMSON, M.D., Surgeon, 58th Regt.

[Read before the Statistical Society, 16th January, 1854.]

In submitting the following information on the physical development of the New Zealander, I trust that, although from the limited field of observation the conclusions are necessarily open to objection, the Society will regard them favourably, as being a contribution to an important branch of the natural history of this *race*, on which, so far as I am aware, no exact observations have yet been recorded.

Captain Cook observes, "The stature of the men in New Zealand is, in general, equal to the largest of those in Europe: they are stout, well-limbed, and fleshy;" and almost every succeeding writer has described them as a tall, strong, and well-proportioned race. Such statements, however, convey no definite information, nor do they furnish data by which to make a comparison with other races of men. With a view to supply this, I recorded the height of 147 men, above the age of puberty, who presented themselves at the military hospital in Auckland in April, 1849, for vaccination, the measurements being all taken without shoes or stockings. The results are shown in the following table:—

Height.	Number at each Height.	Height.	Number at each Height.
5 feet to 5 ft. 1 in.	6	5 ft. 7 in. to 5 ft. 8 in.	20
5 ft. 2 in. to 5 ft. 3 in.	1	5 ft. 8 in. to 5 ft. 9 in.	18
5 ft. 3 in. to 5 ft. 4 in.	2	5 ft. 9 in. to 5 ft. 10 in.	17
5 ft. 4 in. to 5 ft. 5 in.	9	5 ft. 10 in. to 5 ft. 11 in.	13
5 ft. 5 in. to 5 ft. 6 in.	20	5 ft. 11 in. to 6 ft.	3
5 ft. 6 in. to 5 ft. 7 in.	37	6 ft. 5½ inches	1

The average height of these 147 New Zealanders was 5 ft. 6 $\frac{3}{4}$ in. The average of 80 students of the University of Cambridge,* between 18 and 20 years of age, was 5 ft. 9 $\frac{3}{8}$ in., and that of upwards of 800 students in the University of Edinburgh,† comprehending English, Scotch, and Irish, was 5 ft. 8 $\frac{7}{10}$ in., but from both of these an inch should be deducted for the shoes. The average height of 900 Belgians, taken by Quetelet from the government registers, was 5 ft. 4 $\frac{3}{4}$ in. Haller states the mean height of men in the temperate countries of Europe to be from 5 ft. 5 in. to 5 ft. 6 in.

From these statements it would appear that the New Zealanders are not so tall as the natives of Great Britain, but taller than the Belgians, or the men of the temperate countries of Europe. This is

* Quetelet's Treatise on Man. The materials were furnished to him by Professor Whewell.

† On the Results of Experiments made on the Weight, Height, and Strength of above 800 individuals. By James D. Forbes, Esq., F.R.S., L. and E., Professor of Natural Philosophy in the University of Edinburgh.—Read before the Royal Society of Edinburgh.

more clearly shown as regards the natives of Belgium and New Zealand respectively in the following table, in which the proportion per cent. at different heights is stated:—

Height.	New Zealanders.	Belgians.	Proportion per Cent.	
			New Zealanders.	Belgians.
4 ft. 11 in. to 5 ft. 2 in.	6	64	4.4	7.0
5 ft. 2 in. to 5 ft. 6 in.	32	510	22.0	56.6
5 ft. 6 in. to 5 ft. 10 in.	92	304	62.0	34.0
5 ft. 10 in. to 6 ft. 2 in.	16	20	11.0	2.2
Above 6 ft. 2 in.....	1	2	0.6	0.2
Total	147	900	....	....

It will be seen from this table that the proportion of New Zealanders of upwards of 5 ft. 6 in. is double that of the Belgians, while above 5 ft. 10 in. the proportion is as 11.6 to 2.4 respectively.

The following circumstances are stated by Villermé to influence the stature of man. "The human height becomes greater and the growth takes place more rapidly—*ceteris paribus*—in proportion as the country is richer, the comfort more general, houses, clothes, and nourishment better, and labour, fatigue, and privation, during infancy, less; or, in other words, the circumstances accompanying misery put off the period of the complete development of the body, and stunt human stature." These must, doubtless, exercise some influence on the growth, but their effect is much more marked on the muscular development and the rapidity of growth than upon the height, which seems rather to depend upon race. Thus the New Zealanders have worse houses and clothing, and more uncertain, if not poorer nourishment, than the natives of Belgium, and yet they are taller.

At the same time that I registered the height of the New Zealanders I had them carefully weighed in a common lever balance, and the following are the results, deducting the weight of clothes and mats:—

Weight in lbs.	Number at each Weight.	Weight in lbs.	Number at each Weight.
112 to 118	4	161 to 167	8
119 „ 125	11	168 „ 174	9
126 „ 132	13	175 „ 181	1
133 „ 139	28	182 „ 188	2
140 „ 146	26		
147 „ 153	26	Total	146
154 „ 160	18		

The average weight of these 146 men, without their clothes and mats, was 140 lbs., or ten stone. They were principally either Waikato natives or men employed on the government works, both of which classes are usually better fed than the natives generally.

The following statements, derived from various observations made

on natives of Europe, furnish data for comparison with these results. In all of them one-eighteenth has been deducted from the total for the weight of clothes.

The average weight of 1,778 British soldiers serving in New Zealand, whose mean age was 27 years, amounted to 142 lbs.

Eighty students of the University of Cambridge, between the ages of 18 and 23, weighed on an average 143 lbs. each. Sixty men of the village of Massey, in the environs of Paris, averaged 136 lbs. each.

The average weight of Belgians between 18 and 40 years of age, as given by Quetelet, is 135 lbs.

The average weight of several hundred students in the University of Edinburgh, from 15 to 25 years of age, amounted to 140 lbs.

The average obtained by Dr. Hutchinson* from 2,618 observations on Englishmen in the prime of life, and between 5 feet and 6 feet in height, was 148 lbs.

From these results it appears that the average weight of the New Zealanders is rather under that of the natives of Great Britain, and above that of the Belgians and French.

On the Influence of Age on the Weight of New Zealanders.

The following table shows the *weight* of New Zealanders, as compared with British soldiers stationed in New Zealand, students of the University of Edinburgh, and natives of Belgium at different periods of life.

Ages.	New Zealanders.		British Soldiers.		Students at the University of Edinburgh.	Belgians.
	Number Observed.	Average Weight.	Number Observed.	Average Weight.	Average Weight.	Average Weight.
From 16 to 20 years	45	lbs. 133	117	lbs. 132 $\frac{3}{4}$	lbs. 136	121
„ 21 „ 25 „	40	145	751	142 $\frac{5}{8}$	143	138
„ 26 „ 30 „	47	145 $\frac{1}{4}$	560	144	....	140
30 and upwards.....	11	150	350	139	....	140 $\frac{1}{4}$

This shows the New Zealanders to be as well developed at 20 years of age as either the British soldiers or the students of the University of Edinburgh, and much more so than the natives of Belgium. But the results are liable to exception, because the New Zealanders could afford no correct information as to their age, and I was consequently compelled to infer it from their general appearance.

On the Influence of Stature on the Weight of New Zealanders.

The following table shows the average weight of the natives of New Zealand and of Great Britain, and also of British soldiers serving in New Zealand, grouped according to stature:—

* On the Capacity of the Lungs, and on the Respiratory Functions. By J. Hutchinson.—*Medico-Chirurgical Transactions*, vol. xxix.

	New Zealanders.		Natives of Great Britain.*		British Soldiers in New Zealand.	
	Number of Observations.	Average Weight.	Number of Observations.	Average Weight.	Number of Observations.	Average Weight.
5 ft. to 5 ft. 4 in.	18	121 $\frac{3}{4}$	310	127	....	....
5 ft. 5 inches	20	134	214	137	97	133
5 ft. 6 "	36	139	316	136 $\frac{1}{4}$	411	136 $\frac{3}{4}$
5 ft. 7 "	20	142	379	144	432	141 $\frac{1}{2}$
5 ft. 8 "	18	149	468	149	335	146 $\frac{1}{2}$
5 ft. 9 "	17	148	368	157	188	148 $\frac{1}{4}$
5 ft. 10 in. & upwards	17	158	593	164	169	160

* Dr. Hutchinson's paper in the *Medico-Chirurgical Transactions*, already quoted.

This table shows more clearly than any other the development of the New Zealand race. The remarkable similarity in the results of the three classes included in it cannot fail to attract attention. The slight discrepancies are probably attributable to the small number of New Zealanders who came under observation. I was, unfortunately, compelled to give up the investigation, in consequence of inquiries being addressed to the Government by influential natives regarding my object.

The New Zealanders, like all men in a savage state, are indolent and lazy, working only when an absolute necessity for so doing exists. A few days' labour will enable them to plant enough potatoes to sustain life for a year, and to rear a few pigs to exchange for blankets and tobacco. The greater part of their time is spent in a dreamy state of indolence, smoking, talking, and reading. The latter is a newly-acquired taste, but is very common. I have seen them peruse an article in the native newspaper and sit up all night to talk about it. This idle mode of life tends to develop the accumulation of fat, and to increase the weight of the body. The women do much of the hard work, and as the men advance in life they become more lazy and indolent.

On the Chest Development of the New Zealanders.

There is a popular opinion that men with large chests are able to undergo much labour and to endure great fatigue; I therefore measured the circumference of the chest of 151 New Zealanders, and obtained the following results:—

Circumference of Chest.	Number of each size.	Circumference of Chest.	Number of each size.
29 and under 30 inches ...	1	35 and under 36 inches....	33
30 " 31 "	2	36 " 37 "	28
31 " 32 "	3	37 " 38 "	23
32 " 33 "	14	38 " 39 "	9
33 " 34 "	9	39 " 40 "	3
34 " 35 "	25	40 $\frac{1}{2}$ inches.....	1

The mean of the whole was 35·36 inches.

The measurements were made by passing a measuring-tape round the chest on a level with the nipple, the arms being raised above the head so as to remove as much of the muscular substance as possible. During the time of measurement the person was engaged in conversation, to prevent the chest being unusually distended with air.

To obtain data for comparison with Europeans, I measured in precisely the same manner, and with the same tape, 628 men of the 58th Regt., and found the mean size was 35·71 inches. The following table shows the numbers of each size :—

Circumference of Chest.	Number of each size.	Circumference of Chest.	Number of each size.
29 and under 30 inches	1	37 and under 38 inches....	85
30 " 31 " 	1	38 " 39 " 	56
31 " 32 " 	6	39 " 40 " 	19
32 " 33 " 	27	40 " 41 " 	7
33 " 34 " 	49	41 " 42 " ....	....
34 " 35 " 	97	42 " 43 " 	1
35 " 36 " 	145	43 inches	1
36 " 37 " 	133		

As the chest development, however, is considerably influenced by age, I have, for the purpose of comparison, classed the results in the following table according to ages :—

Ages.	New Zealanders.		Soldiers of 58th Regiment.	
	Number Examined.	Average Circumference of Chest.	Number Examined.	Average Circumference of Chest.
16 to 20 years	46	Inches. 33·32	47	Inches. 34·90
20 " 25 " 	40	35·82	274	35·55
25 " 30 " 	47	35·92	213	35·91
30 yrs. and upwards	11	35·95	83	35·76
Total	144	35·26	617	35·71

Thus it will be seen that the measurements in both classes approximate very closely, except for those under 20 years. The average size of the chests of the soldiers is higher than that stated in the table drawn up by Dr. Balfour, and published in Mr. Marshall's work "On the Enlisting and Discharging of Soldiers," second edition, 1839; but his observations were made on recruits about 19 or 20 years of age, and who are generally, at the time of enlistment, out of condition from their irregular habits and poor living. The mammary development, which adds greatly to the circumference of the chest, is increased by good diet; and a large number of the men I examined

between 16 and 20 years of age were fat from having recently come off a voyage from England.

On the Physical Strength of the New Zealanders.

Various instruments have been invented for measuring the strength of man, but as I had none of these within my reach I adopted the following method, which appears to me free from objection, and less liable to error than some of the more complicated apparatus. I arranged some weights on the ground in such a manner that both hands could be used in moving them; I then collected 31 New Zealanders, and ascertained what weight each could raise from the ground. The following are the results:—

6 raised 410 to 420 lbs.		6 raised 360 to 380 lbs.
2 " 400 " 410 "	|	5 " 340 " 360 "
5 " 390 " 400 "		2 " 336 "
3 " 380 " 390 "		2 " 250 " 266 "

The mean weight raised by these men was 367 lbs., the greatest 420 and the least 250.

I then tried, in the same manner, 33 soldiers taken indiscriminately from the ranks, whose average weight, without clothes, was 10 stone 2 lbs., and obtained the following results:—

2 raised 504 lbs.		14 raised 400 to 460 lbs.
8 " 460 to 480 lbs.	|	9 " 350 " 400 "

The average weight raised by these soldiers was 422 lbs., or 55 lbs. more than by the New Zealanders; the greatest was 504 lbs. and the least 350 lbs.

According to Professor Forbes, the average weight raised by the students of 25 years of age at the University of Edinburgh, as measured by Regnier's Dynamometer, was 416 lbs., and, according to Quetelet's observations, that raised by Belgians of 28 years of age was 339 lbs. It appears, therefore, that the New Zealanders are inferior in strength to the natives of Great Britain, but superior to the Belgians. The New Zealanders, however, who were the subjects of these experiments, were chiefly men employed on the government works, accustomed to lift weights, and better fed than many of their countrymen.

Peron in his "*Voyage des découvertes aux terres Australes*," states that the weakest Frenchman was equal in the hands to the strongest man of Van Dieman's Land, and the weakest Englishman stronger than the strongest New Hollander.

The New Hollander and the almost extinct Van Dieman's Landman are a very inferior race to the New Zealander. La Perouse made repeated trials of strength between his sailors and the inhabitants of the Navigators' Islands, a race very similar to the New Zealanders; he states that the result was not favourable to the French, and he partly attributes their misfortunes at one of the islands to the idea of individual superiority which these trials of strength suggested.

The great difference between the strength of the New Zealander and the British soldier is what would scarcely be anticipated, when

we consider how remarkably similar they are in stature, weight, and magnitude of chest. I am inclined to attribute the result to the New Zealander's diet being chiefly vegetable matter—potatoes; while the soldier's consists of a fair proportion of animal food.

To those who delight in thinking that the world is degenerating, and that men were stronger in the olden time before trade and civilization had changed their manners and customs, the foregoing facts may prove interesting, as they show that the New Zealanders—a race just emerging from the savage state—are inferior in physical strength to the natives of a country where the changes in the manners and habits of the people have been carried to an extent which ought to have manifested these disastrous consequences they so much deplore, did they really exist.

From the foregoing data the following seem to be legitimate deductions:—

1. That the average stature of the New Zealand race of men is 5 ft. $6\frac{1}{4}$ in.

2. That they are taller than the natives of Belgium or the temperate countries of Europe, but not so tall as the English.

3. That their average weight, deducting clothes, is 140 lbs., or 10 stone.

4. That they are about equal in weight to the natives of Great Britain, and heavier than those of Belgium.

5. That the indolent life a New Zealander leads tends to increase their bodily weight.

6. That the circumference of his chest is about 35 inches, a little under that of the British soldier.

7. That the New Zealanders are inferior in physical strength to the natives of Great Britain, but superior to the Belgians.

8. That their inferiority in this respect to the English soldier is, probably, in some measure attributable to the difference in their diet.

Statistics of the Northern Whale Fisheries, from the Year 1772 to 1852.
By HENRY MUNROE, M.D., M.R.C.S., L.S.A., &c.

[Read before the Statistical Section of the British Association, at Hull,
8th September, 1853.]

ALTHOUGH the natural history of the Arctic regions, and, perhaps more especially, the practice of whale fishing, is a subject possessing very great interest, yet, my object in this paper is not to give a detailed account of the whale fisheries at Greenland or Davis' Straits, but simply to make a few observations of a local character relative to the success of those vessels sent out from the port of Hull. To those desirous of perusing a most accurate account of the whale fisheries, I know of no work so admirably calculated to give such information as that published in two volumes by the Rev. Dr. Scoresby, entitled "*An Account of the Arctic Regions, with an History and Description of the Northern Whale Fishery.*" No one can read these interesting volumes without being impressed with the great amount of laborious research and practical experience required to obtain such a vast amount of information about a country so little known and so seldom visited.

It is not my intention, in this paper, to give anything like a chronological history of the whale fishery, but simply to draw your attention to those ships sent out from the port of Hull to that country; trace their success during a series of eighty years, pointing out those years when they obtained the greatest amount of oil, and those years when they were the least successful; and also, by a tabular view, show the rise and fall of the whale-fishing trade in Hull from the early period of 1772: Not being a sailor, nor yet one having a knowledge of those regions from practical experience, I shall necessarily be excused making any remarks relative to the causes of the decline of the fishery at Hull.

The first attempt of the English to capture the whale, of which we have any account, says Dr. Scoresby, was made in the year 1594. Elking, in his "*View of the Greenland Trade and the Whale Fishery,*" remarks that the merchants of Hull, who were ever remarkable for their assiduous and enterprising spirit, fitted out ships for the whale fishery as early as the year 1598. Although the English had, by rapid strides, established the whale fishery, says Dr. Scoresby, yet they had not the opportunity of reaping much of the benefit from the trade before other nations presented themselves as competitors. It was this enterprising spirit on the part of the Hull merchants, in equipping ships for the whale and walrus fisheries of Spitzbergen, which led to the discovery by them of Jan Magen, or Trinity Island, and establishing a whale fishery there at a very early period. The Russia Company, wishing to monopolize this branch of commerce, disputed the right of the Hull merchants to participate in it, and wished to debar them from visiting this island. In consequence, however, of a representation of the facts, King James, at this time (1618), privileged the corporation of Hull with a grant of Jan Magen Island fishery. The South Sea Company having persevered in the

whale fishery for several years, whereby they had sunk a vast sum of money, determined to abandon the fishery after the season of 1732. Having solicited government for a bounty, which was granted, to assist them in the speculation, they then determined to resume the trade. The bounty first offered to adventurers consisted in an annual award of 20*s.* per ton on the tonnage of all British whale fishing-ships of 200 tons and upwards. The importance of the whale fisheries, in a national view, became more and more evident to the British legislature, who, to encourage still more its prosecution, enacted, in 1749, that the original bounty of 20*s.* per ton should be increased to 40*s.* per ton. After the passing of this act, the British whale fishery began to assume a respectable appearance.

In 1771, some new regulations were introduced in parliament; the bounty was to be reduced to 30*s.* per ton for a term of 5 years, and to 20*s.* per ton for a third term of the same duration. The whole awards and bounties of this act were then, in 1786, to terminate. In 1782, the town of Hull again petitioned parliament, showing that since the diminution of the bounty in 1771, few ships were fitted out for the whale fisheries; and that since the expiration of the year, when the bounty was decreased, the ships in the trade had also decreased in number so considerably, that it was apprehended this valuable branch of trade would be entirely lost. It also prayed that the bounty might be again advanced to 40*s.* per ton.

I must now refer you to the Tables I and II, which I think will be better understood by an inspection than by any explanation which I can give. The first column contains the name of every ship which has sailed from this port since the year 1772. The smaller columns give the years in which such vessels sailed, and also the amount of oil each ship has obtained at the fishery.

You will perceive by the Table No. III, that few ships were sent to the fisheries after 1771, the year in which the bounty was reduced, only *nine* ships having been fitted out; and from 1779 to 1803, some three or four ships only were sent each year. After this period, it was deemed necessary by government to increase the bounty to 30*s.* per ton—limiting this bounty to 300 tons, on account of some large vessels having been sent out merely to enhance the benefit to be derived from the national bonus. It was afterwards found that so great a bounty was neither so necessary to the success of the trade, nor expedient with regard to the public. In 1786, when the acts, conferring the said bounties, were about expiring, parliament proposed to continue the bounty at the rate of 30*s.* per ton. The sums which this country had paid in bounties for the Greenland fishery has already amounted to 1,265,461*l.* In the year 1785, 94,558*l.* had been paid. In 1786, after the bounty of 30*s.* per ton had been granted, 21 vessels were fitted out for the fisheries from this port; in 1787, 30 vessels; in 1788, 35 vessels; showing a very marked increase, owing, probably, to the grant of the bounty. From this time, 1788 to 1796, the number of vessels sent out was rather on the decrease, only 17 ships that year, 1796, having been sent out. From 1796 to 1821, a period of 25 years, the number of vessels sent out gradually increased, so that in the years 1818 and 1819, 64 vessels were each year equipped for the fisheries, the largest number ever

sent from Hull. From 1821 to 1833 the number of vessels sent out began to decline, owing, probably, to that year, 1821, being a very disastrous one—10 vessels having been lost—the greatest number ever lost in one year. In 1833, the number of ships sent out had decreased to 27. This year, 1833, was the most prosperous year ever recorded: for, though only 27 vessels were sent out, they brought home the great amount of 5,024 tons of oil, being, on the average, 186 tons of oil per ship; the value of which, including bone, amounted to the large sum of 200,920*l*. The year following, 1834, was of all years the most disastrous, 8 ships only having been fitted out, and even out of that small number 6 were lost. From this year, 1834 to 1846, only one ship, and sometimes two, were sent out to the fisheries. Indeed, from the year 1834, the northern whale fishery seemed entirely deserted by the Hull merchants. In 1846, the trade rather revived, and 14 vessels, mostly small ones, were sent out. The town has continued from that date to the present time to send out yearly 13 or 14 small vessels; but they have not met even with the average success of former years, as you will perceive by examining the table of “Average tons of oil per ship.”

From the year 1772 to 1852, a period of 80 years, 194 ships have been fitted out, and sailed from this port to the whale fisheries. Out of this number, 80 have been lost, and 6 more taken by our enemies in war-time. Among the 80 ships reckoned lost, the “Clapham” and “Fame” were burnt at sea. When we consider how very many voyages some vessels have made to the fisheries, we need not wonder how familiar their names have become with the whale-fishing trade. For instance, the ship “Truelove,” which was at the fishery last year, made her first voyage to that country in the year 1784. With the exception of ten years out of the trade, this vessel has, year by year, since 1784, been sent to the whale fisheries, having now made to that cold country 58 voyages. Amongst other familiar names we may mention the

	Voyages.		Voyages.
Manchester (old), which has been	49	Sarah & Elizabeth, which has been	39
Elizabeth	43	Egginton	35
Ellison	40	Molly	32

There is connected with the history of the old ship “Manchester” an incident which should not be forgotten, even in a statistical paper like the present. In the month of August, 1778, for the further accommodation of the shipping of the port, the Old-dock was completed. At four o’clock in the morning the drums beat round the town—the people, in incredible numbers, assembled round the dock—the Dock Company proceeded with an excellent band of music to the basin, and went on board the Greenland ship “Manchester,” chosen because she had been always supposed as successful a ship as any that had been employed in that branch of commerce. On this occasion the “Manchester” was decorated with colours in great profusion, and presented to the pleased spectators a most elegant and uncommon sight. This vessel was followed by another called the “Old Favourite”; and at eight o’clock the gates were opened, the colours hoisted, and the two ships entered the dock in all the magnificence of naval triumph.

Men.—It cannot be denied that the whale-fishing trade, during the last 80 years, has been the support of many thousands of families

in Hull. In the memorial sent to parliament, in the year 1786, for a continuance of the bounty, it is stated that the ships had increased from 38 in number to 154; and that, during the last year, 6,600 men were employed in making the proper utensils and instruments necessary for the fishery. Furthermore, it states that the seamen bred in this nursery were the hardiest and most adventurous race, and always ready, at the shortest notice, to man his Majesty's ships of war, in case of a sudden rupture with any foreign power, and that the ships employed in this trade were at all times ready and suitable for transporting his Majesty's troops and stores to any part of the world whatever. In examining Table III, you will find, that for 10 years, from 1812 to 1821 inclusive, between 2,000 and 3,000 sailors were annually sent from Hull in the whale-fishing ships, and that for 40 years above 1,000 were sent. If we consider that a great number of these men were heads of families, it will give some idea of the vast number of individuals whose only support was from the produce of the whale fisheries, in addition to the many thousands actually engaged in the fitting-out of the vessels with stores and other necessities. Having the number of men given which composed the crews of all the ships, I have, to save a great amount of labour, taken the average number, which is 44 men per ship. It must be remembered, also, that out of this number, one-third of the men were taken from the Shetland or Orkney Isles. It will be seen by the table that, during the period of 80 years, from 1772 to 1852, the Hull whaling ships have taken 85,644 men, an average of 1,070 per year. There can be no doubt, that in 1834, when only 88 men were employed in the fishing trade, many sailors, who had been accustomed to sail to the fisheries, would be left without a ship, and their families necessarily in distress.

Oil.—As a whale-fishing port, I believe that Hull has had no rival in the kingdom. That thousands of tuns of oil have been fished out of the deep waters of the frozen regions, by the ships of the Hull merchants, is a fact not to be disputed; that the produce of the whale fisheries has been a source of great income to the town is a fact not to be controverted. During the period of 80 years, from 1772 to 1852, the returns per year have varied from 5 tuns to 7,976. The lowest number of tuns brought to the town was 5 tuns, in 1837, when only one ship was sent; and the greatest number of tuns obtained was 7,976 in 1820, when 64 ships were sent. The most successful year during that period was in 1833, when 27 ships brought home the immense amount of 5,024 tuns of oil, averaging 186 tuns per ship. The average amount per ship during the last 80 years having been only 88 tuns per ship. In 1820, when the greatest amount of oil was obtained, viz., 7,976 tuns, 64 ships were sent, making an average of 128 tuns per ship. By inspecting the column containing the tuns of oil per ship, you will at once perceive which have been the most successful years:—

In the year 1833 each ship brought, on an average, 186 tons of oil.

"	1828	"	"	176	"
"	1809	"	"	154	"
"	1827	"	"	152	"
"	1832	"	"	150	"
"	1801	"	"	147	"
"	1808	"	"	138	"
"	1823	"	"	138	"
"	1812	"	"	132	"
"	1805	"	"	129	"
"	1811	"	"	128	"
"	1820	"	"	128	"

All the years just mentioned have been years of great success, and must have rewarded very munificently the Hull merchants, and been of great benefit to the thousands of persons employed in the town.

It will be noticed, in looking over the tables, how successful some of the Hull ships have been in obtaining large quantities of oil. The greatest cargoes brought to this town were by the following vessels :—

	Tuns of Oil.			Tuns of Oil
Andrew Marvel in 1833 brought	285	Aurora in 1808 brought		264
Brunswick " 1823 "	283	Brothers " 1801 "		250
Samuels " 1808 "	278	Jane " 1839 "		247
Cumbrian " 1827 "	275	Progress " 1828 "		247
Lee " 1832 "	275	Everthorpe " 1832 "		245
Isabella " 1832 "	275	Ellison " 1823 "		245
Gilder " 1823 "	271	Walker " 1814 "		244
Mary Frances " 1833 "	269	Ingria " 1809 "		243

To show how successful the Hull whalers have been in their fishing expeditions, I may mention that, during the period of 80 years, from 1772 to 1852, they brought home the amount of 171,907 tuns of oil, which is at an average of 88 tuns of oil per ship per annum.

Value of Oil.—As it would be impossible to give the price per tun for which all the oil was sold for the last 80 years, I have taken the price of oil for the majority of those years, and find that 30*l.* per tun is the average price, being rather under than above that amount. The highest price obtained for oil was about the year 1813, when it was sold as high as 55*l.* per tun. The lowest price obtained for oil was about the years, 1804, 1805, and 1806, when it only reached about 20*l.* per tun. It will be seen, by referring to the table, that the smallest amount of money realized by the whale fishery was in the year 1837, when only one ship was sent, and returned with the small freight of 5 tuns of oil, at the value of 150*l.* The largest amount of money obtained for oil, of course, would be in those years when the ships sent were the greatest in number, or when they were the most successful in their expedition. The greatest amount of oil ever brought to the town from the whale fisheries was in the year 1820, when 62 ships were fitted out for the country, one of which was lost; and they returned with the very great amount of 7,976 tuns of oil, realizing the sum of 239,280*l.*, at the average rate of 30*l.* per tun.

The most successful years would be those when the greatest amount of oil was obtained, and they were the following :—

Years.	Ships.	Tuns of Oil.	Realising in Amount.
			£
1820	62	7,976	239,280
1814	58	7,346	220,380
1812	49	6,502	195,060
1818	64	6,216	186,480
1821	61	5,888	176,640
1819	64	5,886	176,595
1828	30	5,807	159,210
1816	55	5,276	158,280
1805	40	5,174	154,520
1833	27	5,024	150,720

The gross amount of oil brought to this port by the whaling-ships, from the year 1772 to 1852, was 171,907 tuns, and realized the immense amount of 5,158,080*l.* for oil alone, being at the average of 64,774*l.* per year for the last 80 years.

Bone—As it would be difficult to procure a true account of the quantity of whalebone obtained in the earlier years—some of the whales yielding more bone in proportion to their produce of oil than others—I have thought it more advisable to take a fair average of bone in proportion to the oil, for a series of 40 or 50 years, deeming that calculation sufficiently correct for our present purpose. “It is worthy of remark,” says Dr. Scoresby, “that the whales of Spitzbergen afforded a larger proportion of whalebone, compared with the quantity of oil, than the fish of Davis’ Straits—the Greenland fish yielding a ton of fins for every 19½ tuns of oil, and the Davis’ Straits fish a ton of fins for every 21 tuns of oil.” I have, therefore, to be in *medias res*, calculated the produce of whalebone at the rate of one cwt. of bone for every tun of oil, or one ton of bone for every 20 tons of oil.

The price of whalebone has varied very much since its first importation into England. It was purchased at that time of the Dutch, at the rate of 700*l.* per ton. It is calculated that at least 100,000*l.* per annum were paid to the Dutch for this article about the years 1715 to 1721, when the price was about 400*l.* per ton. From the year 1763 to 1780, the price in England was about 500*l.* per ton. After this period, it was, for many years, sold for about 350*l.* The lowest price ever obtained for bone was about the years 1804, 1805, and 1806, when it was sold for 25*l.* per ton. It was then thought scarcely worth the trouble of cleaning, and, to save expense, was principally cleaned by the lads belonging to the ships. Since that time, the price has fluctuated very much—from 150*l.* to 250*l.* per ton. I have, therefore, taken the average price of whalebone for the last 80 years at 200*l.* Its present price is nearly that amount. That the whalebone was a great source of income will be perceived by examining the column headed “Value of Bone,” in which it will be found to have realized in the year 1820 the large sum of 79,000*l.*, no mean item to be divided amongst 62 ships. For 11 years the value of bone has been above 50,000*l.* per annum. The gross amount of bone brought from the fisheries from the year 1772 to 1852 was

8,556 tons, and realized the sum of 1,691,200*l.*, being at the average of 21,140*l.* per year, for the last 80 years. I, perhaps, ought to remark that, for the last 6 or 7 years, the fishing-ships have brought a great quantity of seal oil, for which, in the tables, bone has been reckoned; but owing to the average price of bone, at 200*l.* per ton, being rather under than above the true amount realized, I think that the small amount of oil obtained in those years will make little or no difference.

To arrive at a correct knowledge of the worth of the whale-fishing trade to the town of Hull, I must refer you to the last column of Table III, giving the total value of oil and bone for every year since 1772. Those who may not have paid attention to the subject will probably be surprised to learn, that in the year 1820 the total value of oil and bone amounted to the immense sum of 318,880*l.*

	Total Value of Oil and Bone.		Total Value of Oil and Bone.
1814	293,700	1821	235,440
1812	260,060	1819	235,395
1818	248,480		

I may further add that, for one year, the amount of oil and bone realized above 300,000*l.*; that for 12 years, the amount was above 200,000*l.* per year; that for 16 years, it was above 100,000*l.* per year. In the last place, I may draw your attention to the total value of the gross amount of oil and bone fished out of the vast deep by ships sailing from this port since the year 1772, which amounts to 6,847,580*l.* being on the average of 85,594*l.* per year for the last 80 years. That this amount of money realized by the Hull merchants every year has been a source of great emolument to them and to the town at large, there cannot, I think, be a question. I believe there is not a merchant in the town, if he were sure of even the *average* success of each ship for the last 80 years, whose cargo amounts to the value of 3,513*l.* per ship, but would have at least one vessel fitted out for the fishery next year. It will be noticed that, in these calculations, I have made no mention of the bounty guaranteed by government, which would increase the value of the returns by many thousand pounds.

The causes of the decline of the northern whale-fishing trade in Hull is a subject with which I am not sufficiently conversant to be able to offer an opinion. I, therefore, close my remarks on the subject, perhaps dry and tedious, with the hope that Hull might again experience the successful year of 1820, when 62 ships brought home from the whale fisheries the large amount of 7,976 tons of oil.

TABLE III.

Years.	Men. Average per Ship 44.	Ships.	Ships lost.	Tuns of Oil.	Value of Oil, at the Average Price of £30 per Tun.	Average Tuns of Oil per Ship.	Tons of Bone, at the Average of 1 ewt. per Tun of Oil.	Value of Bone, at the Average Price of £200 per Ton.	Total Value of Oil and Bone.
					£			£	£
1772	396	9	....	379	11,370	44	18	3,600	14,970
1773	396	9	....	285	8,550	31	14	2,800	11,350
1774	396	9	1	466	13,980	51	23	4,600	18,580
1775	528	12	2	68	2,040	5	3	600	2,640
1776	440	10	1	230	6,900	23	11	2,200	9,100
1777	396	9	....	349	10,470	38	17	3,400	13,870
1778	352	8	....	179	5,370	22	8	1,600	6,970
1779	176	4	1	232	6,960	58	11	2,200	9,160
1780	176	4	....	311	9,330	77	15	3,000	12,330
1781	132	3	....	261	7,830	87	13	2,600	10,430
1782	132	3	....	217	6,510	72	10	2,000	8,510
1783	176	4	....	290	8,700	72	14	2,800	11,500
1784	396	9	....	394 $\frac{1}{2}$	11,835	43	19	3,800	15,635
1785	660	15	....	722	21,660	48	36	7,200	28,860
1786	924	21	1	918	27,540	43	45	9,000	36,540
1787	1,320	30	1	1,133	33,960	38	56	11,200	45,160
1788	1,540	34	....	1,025 $\frac{1}{2}$	30,765	30	51	10,200	40,965
1789	1,276	29	2	854	25,520	26	42	8,400	33,920
1790	1,056	24	2	836 $\frac{1}{2}$	25,095	34	41	8,200	33,295
1791	924	21	2	345	10,350	16	17	3,400	13,750
1792	880	20	....	900	27,000	45	45	9,000	36,000
1793	792	18	....	835	25,050	46	41	8,200	33,250
1794	748	17	1	710 $\frac{1}{2}$	21,315	41	35	7,000	28,315
1795	616	14	....	1,158 $\frac{1}{2}$	34,755	82	57	11,400	46,155
1796	748	17	....	1,678	50,340	98	83	16,600	66,940
1797	968	22	2	1,741	53,230	79	87	17,400	70,630
1798	1,012	23	....	2,159	64,770	93	107	21,400	86,170
1799	1,234	28	2	2,229	66,870	79	111	22,200	89,070
1800	1,056	24	....	1,818	54,540	75	90	18,000	72,540
1801	1,200	25	1	2,156	64,680	86	107	21,400	86,080
1802	1,584	36	....	2,972 $\frac{1}{2}$	89,175	82	148	29,600	118,775
1803	1,804	41	....	2,284	68,520	55	114	22,800	91,320
1804	1,892	43	3	4,017	120,510	93	200	40,000	160,510
1805	1,760	40	1	5,174	154,520	129	258	51,600	206,120
1806	1,760	40	....	3,440	103,200	86	172	34,400	137,600
1807	1,672	38	3	4,368 $\frac{1}{2}$	141,055	114	218	43,600	174,655
1808	1,408	32	3	4,448	133,440	138	222	44,400	177,840
1809	1,234	28	2	4,321	129,630	154	216	23,200	152,830
1810	1,496	34	....	5,020	150,600	147	251	50,200	200,800
1811	1,848	42	1	5,398	161,840	128	269	53,800	215,740
1812	2,156	49	....	6,502	195,060	132	325	65,000	260,060
1813	2,420	55	1	3,490	104,700	63	174	34,800	139,500
1814	2,552	58	1	7,346	220,310	126	367	73,400	293,780
1815	2,552	58	2	3,785	112,050	98	186	37,200	149,250
1816	2,420	56	....	5,276	158,280	95	263	52,600	210,880
1817	2,552	58	1	4,653	139,590	80	232	46,400	185,990
1818	2,816	64	1	6,216	186,480	97	310	62,000	248,480
1819	2,816	64	4	5,886 $\frac{1}{2}$	176,640	91	294	58,800	235,395
1820	2,728	62	1	7,976	239,280	128	398	79,600	318,880
1821	2,688	61	10	5,888	176,640	96	294	58,800	235,440
1822	1,760	40	....	3,085	92,550	77	154	30,800	123,350

TABLE III.—Continued.

Years.	Men. Average per Ship 44.	Ships.	Ships lost.	Tuns of Oil.	Value of Oil, at the Average Price of £30 per Tun.	Average Tuns of Oil per Ship.	Tons of Bone, at the Average of 1 cwt. per Tun of Oil.	Value of Bone, at the Average Price of £200 per Ton.	Total Value of Oil and Bone.
					£			£	£
1823...	1,804	41	2	5,646	169,380	138	282	56,400	225,780
1824...	1,672	38	2	3,500	105,000	92	175	35,000	140,000
1825...	1,584	36	....	2,513	75,090	64	125	25,000	100,390
1826...	1,408	32	1	2,504	75,120	78	125	25,000	100,120
1827...	1,320	30	1	4,576	137,250	152	228	45,600	182,850
1828...	1,320	30	1	5,307	159,210	676	265	53,000	212,210
1829...	1,452	33	1	3,981	119,430	120	199	39,800	159,230
1830...	1,452	33	6	1,276 $\frac{1}{2}$	31,295	38	63	12,600	50,895
1831...	1,408	32	....	1,823	54,690	56	91	18,200	72,890
1832...	1,320	30	2	4,524	135,720	150	226	45,200	180,920
1833...	1,188	27	1	5,024	150,720	186	251	50,200	200,920
1834...	88	8	6	225	6,750	28	11	2,200	8,950
1835...	88	2	....	51	1,530	25	2	400	1,930
1836...	88	2	....	23 $\frac{1}{2}$	705	11	1	200	905
1837...	44	1	....	5	150	5	....	....	150
1838...	44	1	....	100	3,000	100	5	1,000	4,000
1839...	44	1	....	125	3,750	125	6	1,200	3,950
1840...	44	1	....	28	840	28	1	200	1,040
1841...	44	1	....	28	840	28	1	200	1,040
1842...	44	1	....	19	570	19	....	....	570
1843...	44	1	....	125	3,750	125	6	1,200	4,950
1844...	44	1	....	72	2,160	72	3	600	2,760
1845...	88	2	....	145	4,350	72	7	1,400	5,750
1846...	616	14	....	638	19,140	45	31	6,200	25,340
1847...	572	13	1	998	29,940	76	49	9,800	39,740
1848...	616	14	1	434	13,020	31	21	4,200	17,220
1849...	572	13	3	416	12,480	32	20	4,000	16,480
1850...	528	12	....	254	7,620	44	12	2,400	10,020
1851...	528	12	....	569 $\frac{1}{2}$	17,085	44	28	5,600	22,685
1852...	616	14	....	600 $\frac{1}{2}$	18,915	44	30	6,000	24,915

Total:—Men, 85,664; ships, 1,940; ships lost, 80; tuns of oil, 171,907; value of oil, at the average price of 30*l.* per tun, 5,158,080*l.*; average tuns of oil per ship, 5,995; tuns of bone, at the average of 1 cwt. per tun of oil, 8,556; value of bone, at the average price of 200*l.* per tun, 1,691,200*l.*; total value of oil and bone, 6,847,580*l.*

On the System of Registration in the United States of America.
By JOSIAH CURTIS, M.D.

[Read before the Statistical Society, 19th December, 1853.]

THE idea of making authentic records of births, marriages, and deaths, has been operative, in a very inefficient manner, however, in many states of the Union for a long series of years. But it was not until quite recently that anything like a systematic arrangement has been adopted by legal enactments. Soon after the passage of the English Registration Act, in 1837, the subject received more attention, especially in the state of Massachusetts. This state passed a registration law, modelled somewhat after the English Act, in May, 1842. This law was modified in March, 1844, and still further improved by the Act of May, 1849.

Under this law, ten official annual reports have been made to the legislature of Massachusetts. This has been an example to other states in the confederacy, as follows:—The state of New York passed a law similar to that of Massachusetts, in April, 1847. Two state reports were made, one in April, 1848, and the other in April, 1849. Since then, no reports have been made, and the law has become quite inefficient. Several attempts have been made by the friends of the law to make it more effectual; while the opponents of the measure have tried to obtain its repeal. A motion to repeal it was lost at the last session of the legislature, by a vote of nearly two to one; while a motion to render it more effective, especially so far as it applies to the city of New York, was successful. It has many strong and influential advocates, and it is confidently expected that soon the law will be in full force.

The state of New Jersey passed a registration law in March, 1848, and remodelled it, with improvements, in March, 1851. Two annual reports have been made, bearing date respectively February, 1852 and 1853, and a third report is now nearly ready.

Connecticut passed their law on this subject in June, 1848. Three annual reports have appeared, the last bearing date May, 1852. No report was submitted to the legislature of that state during this year; but the law is in the hands of an efficient committee of the legislature for modification and perfection, to be submitted to the action of the legislature in May next.

New Hampshire enacted a law in July, 1849, and modified it with improvements in July, 1851. No reports are required by the Act.

Rhode Island established a law in 1849, which was very much improved last year, and the first report is now in the press.

Pennsylvania passed an Act in April, 1851, but it did not receive the signature of the governor of that state, and therefore did not become a law, until January, 1852.

Kentucky passed a law in January, 1852, and in due season will furnish valuable reports.

Virginia created a registration law on the last night of the last session of her legislature.

The subject is agitated in other states, and in one—namely, South Carolina—it has been brought to the notice of the legislature during each of the last five years; and I am assured, in a communication

from Dr. T. Y. Simon, of the city of Charleston, who is chairman of the Medical Board, that it shall continue to be urged upon the attention of that body every year until successful, unless death shall suspend his zeal and labours in behalf of such a measure.

The importance of a systematic and scientific registration universally receives the sanction and advocacy of the leading medical men of our country; but, unfortunately, its utility is not seen by the mere politician. An example is seen in the fact that the laws of Rhode Island and Kentucky are largely due to the efforts of Dr. J. Mauran, of Providence, and Dr. W. L. Sutton, of Georgetown, who are respectively the presidents of the medical societies of those states; while in Pennsylvania, the executive chief withheld his sanction to the Act after it had passed the legislature of that state, and it became a law only by a provision of their constitution, which makes an Act a law if not vetoed, with reasons for the governor's objections, prior to the tenth day of the next convening of the legislative body. In this case, that body manifested their approval of the enactment by confirming it with a handsome special appropriation from the state funds to put it into successful operation.

In Massachusetts, the law was obtained in compliance with petitions from the American Statistical Association, the Academy of Arts and Sciences, and the State Medical Society. Their ten reports exhibit results quite analogous to those of England in many particulars.

The population of this state was in 1850 a little less than a million, being 991,514. The increase from 1840 was 256,814, being 34.81 per cent. on the population of 1840. In the counties of Middlesex (which includes the city of Lowell,) and Suffolk, in which the city of Boston is located, the increase of population during the decade was over 50 per cent., on that of 1840; much of this is due to immigration. In 1830, only 1.58 per cent. of the population of the state was of foreign origin; in 1840, it arose to 4.72 per cent.; and in 1850, it amounted to 16.54 per cent., or one-sixth of the inhabitants.

During the three years 1849-1851 inclusive, there was an annual average of 1 birth to 36 inhabitants, according to the census of 1850; while during five years, 1839-1843, there was annually 1 birth in 31 inhabitants in England, 1 in 35 in France, and 1 in 26 in Prussia and Austria.

Of marriages, I perceive that in England about 8 per cent. of the males, and a little over 13 per cent. of the females, are under 21 years of age. In Massachusetts, at the time of marriage, only 1.66 per cent. of the males, and 24.40 per cent. of the females, are under 20 years of age; and of all marriages in that state, among the females, nearly three-fourths are under the age of 25 years. Taking the same periods of time as above for the births in the several localities, and we have an annual marriage to every 102 inhabitants of Massachusetts, and 1 to 130 in England, 1 to 123 in France and Austria, and 1 to 110 in Prussia.

The proportion of deaths to the population in Massachusetts is not far from 1 in 52.25, or 1.91 per cent. This rate is not equally distributed over the territory, but is severe in proportion to the density of population.

The Results of the Census of Great Britain in 1851, with a Description of the Machinery and Processes employed to obtain the Returns; also an Appendix of Tables of Reference. By EDWARD CHESHIRE, Assistant-Secretary.

[*Abstract of a Paper read before the British Association for the Advancement of Science, at Hull, on Thursday, the 8th of September, 1853.*]

THE author commenced by reciting the onerous duties of the Registrar General and of his able assistants Dr. Farr and Mr. Horace Mann. The census returns extended, in manuscript, over some *forty thousand* volumes, and occupied the census department upwards of two years to reduce to the form in which the first portion of the census was published, viz., to the limits of three bulky folios. The objects of the census were explained, and the machinery employed to take it. Great Britain was apportioned into 38,740 enumeration districts, and to each of them a duly qualified enumerator was appointed. The author illustrated the extent of this army of enumerators, and the labour of engaging their services on the same day, by stating that it would take $10\frac{3}{4}$ hours to count them, at the rate of one a second, and that the army recently encamped at Chobham would not have sufficed to enumerate a *fourth* of the population of Great Britain. The boundaries of the enumeration districts, and the duties of the enumerators, were defined. The number of householders' schedules forwarded from the Census Office was 7,000,000, weighing 40 tons, or if the blank enumeration books and other forms were included, upwards of 52 tons. The processes employed to enumerate persons sleeping in barns, tents, and the open air, and in vessels, were severally explained: also the means by which the numbers of British subjects in foreign States were obtained. The precautions taken to secure accurate returns were recited; they involved the final process of a minute examination and totaling at the Census Office, of 20 millions of entries, contained on upwards of $1\frac{1}{4}$ millions of pages of the enumerators' books. The latter were nearly 39,000 in number. The boundaries of the fourteen registration divisions were traced, and the plan of publication of the census was explained. The whole of the statistics of any one of the divisions might be separately procured, and was accompanied by a map of the districts and counties of which it was comprised. The number of persons absent from Great Britain on the night of the 30th of March, 1851, was nearly 200,000:—viz., army, navy, and merchant service, 162,490; and British subjects resident and travelling in foreign countries, 33,775. The various causes of displacements of the population were recited: and the general movement of the population on the occasion of the Great Exhibition was alluded to.* The number of *visits* to the Crystal Palace were 6,039,195,—and the number of *persons* who visited it were 2,000,000; nevertheless, the landing of only 65,233 aliens was reported in the year. The population of Great Britain in 1851 is subjoined:—

* It is stated incidentally in the census, that in 1845 a million and a half of people on the Continent visited, in pilgrimage, the *Holy Coat* at Trèves.

TABLE I.
Population of Great Britain in 1851.

	Males.	Females.	Total.
England	8,281,734	8,640,154	16,921,888
Scotland	1,375,479	1,513,263	2,888,742
Wales	499,491	506,230	1,005,721
Islands	66,854	76,272	143,126
Army, Navy, and Merchant Service	162,490	.....	162,490
Total	10,386,048	10,735,919	21,121,967

The census illustrated this 21,000,000 of people by an allusion to the Great Exhibition. On one or two occasions 100,000 persons visited the Crystal Palace in a single day, consequently 211 days of such a living stream would represent the number of the British population. Another way of realizing 21,000,000 of people was arrived at by considering their numbers in relation to space: allowing a square yard to each person they would cover 7 *square miles*. The author supplied a further illustration, by stating that if all the people of Great Britain had to pass through London in procession, 4 abreast, and every facility was afforded for their free and uninterrupted passage for 12 hours daily, Sundays excepted, it would take nearly 3 *months* for the whole population of Great Britain to file through at *quick* march, *four* deep. The excess of females in Great Britain was 512,361, or as many as would have filled the Crystal Palace 5 times over. The proportion between the sexes was 100 males to every 105 females, a remarkable fact when it was considered that the births during the last 13 years had given the reversed proportion of 105 *boys* to 100 *girls*. The annexed table exhibits the population of Great Britain at each census from 1801 to 1851 inclusive:—

TABLE II.
Population of Great Britain at each Census from 1801 to 1851, inclusive.

Years.	Males.	Females.	Total.
1801	5,368,703	5,548,730	10,917,433
1811	6,111,261	6,312,859	12,424,120
1821	7,096,053	7,306,590	14,402,643
1831	8,133,446	8,430,692	16,564,138
1841	9,232,418	9,581,368	18,813,786
1851	10,386,048	10,735,919	21,121,967

The increase of population in the last half century was upwards of 10,000,000, and nearly equalled the increase in all preceding ages, notwithstanding that millions had emigrated in the interval. The increase still continued, but the *rate* of increase had declined, chiefly from accelerated emigration. At the rate of increase prevailing from 1801 to 1851, the population would double itself in 52½ years. The author here quoted several paragraphs from the Census Report, in

which were discussed the relation of population to mean lifetime and to interval between generations; the effects of fertile marriages and of early marriages respectively; also the result of a change in the social condition of unmarried women; likewise the effect of migration and emigration, respectively, on population; the effect of an abundance of the necessaries of life, and, on the contrary, the result of famines, pestilences, and public calamities. The terms "family" and "occupier" were defined, and some remarks by Dr. Carus, on English dwellings, were cited. The English (says the Doctor) divide their edifices *perpendicularly* into houses, while on the Continent and in many parts of Scotland the edifices are divided *horizontally* into floors. The definition of a "house," adopted for the purposes of the census, was, "isolated dwellings or dwellings separated by party walls." The following table gives the number of houses in Great Britain in 1851:—

TABLE III.
Houses in Great Britain in 1851.

	Houses.			
	Inhabited.	Uninhabited.	Building.	Total.
England	3,076,620	144,499	25,192	3,246,311
Scotland	370,308	12,146	2,420	384,874
Wales	201,419	8,995	1,379	211,793
Islands.....	21,845	1,095	203	23,143
Total	3,670,192	166,735	29,194	3,866,121

About 4 per cent of the houses in Great Britain were unoccupied in 1851, and to every 131 houses inhabited or uninhabited there was *one* in course of erection. In England and Wales the number of persons to a house was 5·5; in Scotland 7·8, or about the same as in London; in Edinburgh and Glasgow the numbers were respectively 20·6 and 27·5. Subjoined is a table of the number of inhabited houses and families in Great Britain at each census, from 1801 to 1851,—also of persons to a house, excluding the Islands in the British seas:—

TABLE IV.
Inhabited Houses and Families in Great Britain at each Census from 1801 to 1851, inclusive.

Years.	Inhabited Houses.	Families.	Persons to a House.	Persons to a Family.
1801.....	1,870,476	2,260,802	5·6	4·645
1811.....	2,101,597	2,544,215	5·7	4·705
1821.....	2,429,630	2,941,383	5·8	4·791
1831.....	2,850,937	3,414,175	5·7	4·763
1841	3,446,797	(No returns.)	5·4	(No returns.)
1851.....	3,648,347	4,312,388	5·7	4·825

Note.—This table does not include the islands in the British seas.

The number of inhabited houses had nearly doubled in the last half century, and upwards of two million new families had been founded. 67,609 families, taken at hazard, were analyzed into their constituent parts, and they gave some curious results. About 5 per cent. only of the families in Great Britain consisted of husband, wife, children, and servants, generally considered the requisites of domestic felicity.

The number of children at home in families varied considerably. Of the 41,916 families having man and wife at their head, 11,917 had *no* children at home; 8,570 had each *one* child at home; 7,376 had each *two* children at home; 5,611 had each *three* children at home; 4,027 had each *four* children at home; and so forth in a decreasing scale, until we come to 14 families having each *ten* children at home; 5 having each *eleven* children at home; and 1 having *twelve* children at home. These results applied to Great Britain generally indicated that 893 families had each *ten* children at home, 317 had each *eleven*, and 64 had each *twelve* children at home; nevertheless, the average number of children at home in families did not exceed two; thus showing, that however violent might be the fluctuations in a small number of observed facts, the average was not disturbed if the area of observation was sufficiently extended.

The annexed table gives the number of each class of public institutions in Great Britain in 1851, and the number of persons inhabiting them.

TABLE V.

Public Institutions in Great Britain in 1851.

Class of Institution.	Number of Institutions.	Number of Persons Inhabiting them.		
		Males.	Females.	Total.
Barracks	174	44,833	9,100	53,933
Workhouses	746	65,786	65,796	131,582
Prisons	257	24,593	6,366	30,959
Lunatic Asylums	149	9,753	11,251	21,004
Hospitals.....	118	5,893	5,754	11,647
Asylums, &c.	573	27,183	19,548	46,731
Total	2,017	178,041	117,815	295,856

Of these 295,856 persons, 260,340 were inmates, and 35,516 officers and servants. The excess of males in the prisons arose from the fact that crime was four times as prevalent among males as among females.* The equality of the sexes in workhouses was remarkable. In the lunatic asylums there was a preponderance of females. The number of houseless classes, *i. e.* of persons sleeping in barns, tents, and the open air, on the night of the census, was 18,249. The following table gives the number of these classes, together with those sleeping in barges and vessels:—

* Vide Mr. Redgrave's valuable Criminal Tables.

TABLE VI.

Persons in Barns, Tents, Barges, and Vessels, in Great Britain on the Night of the Census in 1851.

Persons sleeping in	Males.	Females.	Total.
Barges	10,395	2,529	12,924
Barns	7,251	2,721	9,972
Tents or Open Air	4,614	3,663	8,277
Vessels	48,895	2,853	51,748
Total	71,155	11,766	82,921

It was mentioned as a curious trait of gipsy feeling that a whole tribe struck their tents, and passed into another parish, in order to escape enumeration. The composition of a town was next described; also, the laws operating upon the location of families. The number of cities and towns of various magnitudes in Great Britain was 815:—viz. 580 in England and Wales, 225 in Scotland, and 10 in the Channel Islands. The town and country population was equally balanced:— $10\frac{1}{2}$ millions against $10\frac{1}{2}$ millions. The density in the towns was 3,337 persons to the square mile; in the country only 120. The average population of each town in England and Wales was 15,500; of each town in Scotland 6,654. The average ground area of the English town was $4\frac{2}{3}$ miles. The manner in which the ground area in Great Britain was occupied by the population was illustrated by a series of squares. The adventitious character of certain towns was alluded to; many had risen rapidly from villages to cities, and had almost acquired a metropolitan character. In 1851 Great Britain contained 70 towns, of 20,000 inhabitants and upwards, amounting, in the aggregate, to 34 per cent. of the total population of the country; whereas, in 1801, the population of such towns amounted to 23 per cent. only of the enumerated population, thus showing, in a marked degree, the increasing tendency of the people to concentrate themselves in masses. London extended over an area of 78,029 acres, or 122 square miles, and the number of its inhabitants, rapidly increasing, was 2,362,236 on the day of the last census. The author illustrated this number by a curious calculation:—a conception of this vast mass of people might be formed by the fact, that if the metropolis was surrounded by a wall, having a north gate, a south gate, an east gate, and a west gate, and each of the four gates was of sufficient width to allow a column of persons to pass out freely *four* abreast, and a peremptory necessity required the immediate evacuation of the city, it could not be accomplished under *four-and-twenty* hours, by the expiration of which time the head of each of the four columns would have advanced a no less distance than *seventy-five* miles from their respective gates, all the people being in *close* file, *four* deep. In respect to the density or proximity of the population, a French writer had suggested the term “specific population,” after the analogy of “specific gravity,” in lieu of the terms in common use, “thinly populated” and “populous.” The table annexed exhibits the area of Great Britain in acres and square miles, the square

in miles, the number of acres to a person, of persons to a square mile, and the mean proximity of the population on the hypothesis of an equal distribution :—

TABLE VII.

Area of Great Britain and Density of Population in 1851.

	Area.		Square (in Miles.)	Acres to a Person.	Persons to a Sq. Mile.	Proximity of Persons in Yards.
	In Acres.	In sq. Miles.				
England	32,590,429	50,922	226	1·9	332	104
Scotland	20,047,462	31,324	177	6·9	92	197
Wales	4,734,486	7,398	86	4·7	135	162
Islands	252,000	391	20	1·8	363	99
Great Britain	57,624,377	90,038	299	2·7	233	124

The 624 districts of England and Wales, classed in an order of density, ranged from 18 persons to the square mile in Northumberland, to 185,751 in the East London district. In all London there were 19,375 persons to the square mile. In 1801 the people of England were on an average 153 yards asunder, in 1851 only 108 yards. The mean distance between their houses in 1801 was 362 yards, in 1851 only 252 yards. In London the mean proximity in 1801 was 21 yards, in 1851 only 14 yards. The number of islands in the British group were stated at 500, but inhabitants were only found on 175 on the day of the census. The early history of the more celebrated of the islands was given. The population of the chief of the group, Great Britain, had been given. Ireland, as enumerated by another department, contained 6,553,357 inhabitants; Anglesey, the next most populous island in the group, had 57,318 inhabitants; Jersey, 57,020; the Isle of Man, 52,344; the Isle of Wight, 50,324; Guernsey, 29,757; Lewis, 22,918; Skye, 21,528; Shetland, 20,936; Orkney, 16,668; Islay, 12,334; Bute, 9,351; Mull, 7,185; and Arran, 5,857. 17 islands contained a population ranging from 4,006 to 1,064; 52 had a population ranging from 947 to 105; and the remaining 92 inhabited islands ranged from a population of 92 downwards, until at last we came to an island inhabited by one solitary man.

The report investigated, at great length, the territorial distribution of Britain from the earliest times, including the divisions made by the Romans and Saxons successively, and the state of things under the Heptarchy. It traced the division of the country into shires, hundreds, and tythings, to Alfred the Great, and the circuits to Henry II. (A.D. 1179). The terms "hundreds" and "tythings" had their origin in a system of numeration.

The 196 reformed boroughs in England and Wales contained a total population of 4,315,269 inhabitants; the population of 64 ranged under 5,000; 43 from 5,000 to 10,000; 68 from 10,000 to 50,000; 14 from 50,000 to 100,000; 4 from 100,000 to 200,000; and 3 above 200,000. The city of London is still unreformed, and therefore not included in these. If inserted in the list it would stand below

Sheffield, as having a population of only 127,869 inhabitants, a *one-nineteenth* portion of the population of London.

Scotland contained 83 royal and municipal burghs, having a total population of 752,777 inhabitants: 55 had a population under 5,000, 16 from 5,000 to 10,000, 11 from 10,000 to 70,000, and one 148,000.

"The task," stated the report, "of obtaining accurately the population of the ecclesiastical districts was one of great difficulty. Designed exclusively for spiritual purposes, their boundaries were quite ignored by the general public, and rarely known by any secular officers; while, in many cases, even the clergy themselves, unprovided with maps or plans, were uncertain as to the limits of their respective cures."

The most important fact which the census established was, the addition, in half a century, of *ten millions* of people to the British population. The increase of population in the half of this century nearly equalled the increase in all preceding ages; and the addition in the last ten years, of *two millions three hundred thousand* to the inhabitants of these islands, exceeded the increase in the last *fifty* years of the eighteenth century. Contemporaneously with the increase of the population at home, emigration had proceeded since 1750 to such an extent as to people large states in America, and colonise extensive tracts in all the temperate regions of the world. Two other movements of the population had been going on in the United Kingdom—the immigration of the population of Ireland into Great Britain, and the constant flow of the country population into the towns. The current of the Celtic migration was now diverted from these shores, and chiefly flowed in the direction of the United States of America. The number of emigrants sailing from the United Kingdom had increased from 57,212 in 1843, to 368,764 in 1852, in which year they amounted to upwards of *a thousand* a day.

In summing up the general results of the census the Report inquires: "Can the population of Great Britain be sustained, at the rate of emigration which is now going on, and which will probably be continued for many years?" Also: "Can the population of England be profitably employed?" The solution of these questions will be assisted by the publication of the second and final portion of the census, in which the social condition and occupations of the people will be given. And, finally, allusion is made to the activity of the intelligence and religious feelings of the people, as evidenced by the increased demand for instruction and for places of public worship.*

The following tables have been selected from the Appendix, as best deserving a record in this Journal:—

* Since the foregoing was in type the "Public Worship" portion of the Census has been issued by the Registrar-General. It consists of a report of surpassing interest, with a series of elaborate tables, both by Mr. Horace Mann, to whom was confided this part of the inquiry. An abridgement has been published by Routledge and Co. in a cheap form, and has obtained already a deservedly wide circulation.

APPENDIX.

TABLE I.

Population and Number of Houses in England, Scotland, Wales, and the Islands in the British Seas, respectively, in 1851.

	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
England....	8,281,734	8,640,154	16,921,888	3,076,620	144,499	25,192
Scotland....	1,375,479	1,513,263	2,888,742	370,308	12,146	2,420
Wales	499,491	506,230	1,005,721	201,419	8,995	1,379
Islands	66,854	76,272	143,126	21,845	1,095	203
Total....	10,223,558	10,735,919	20,959,477	3,670,192	166,735	29,194

TABLE II.

Population and Number of Houses in Great Britain, as enumerated at each Census from 1801 to 1851, inclusive.

Years.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
1801....	5,030,226	5,548,730	10,578,956	1,882,476	76,320	(no returns)
1811....	5,737,261	6,312,859	12,050,120	2,113,897	62,664	18,626
1821....	6,874,675	7,306,590	14,181,265	2,443,393	82,791	21,777
1831....	7,934,201	8,430,692	16,364,893	2,866,595	133,331	27,553
1841....	9,077,004	9,581,368	18,658,372	3,465,987	198,141	30,310
1851....	10,223,558	10,735,919	20,959,477	3,670,192	166,735	29,194

TABLE III.

Population and Number of Houses in England and Wales, as enumerated at each Census from 1801 to 1851, inclusive.

Years.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
1801....	4,254,735	4,637,801	8,892,536	1,575,923	57,476	(no returns)
1811....	4,873,605	5,290,651	10,164,256	1,797,504	51,020	16,207
1821....	5,850,319	6,149,917	12,000,236	2,088,156	69,707	19,274
1831....	6,771,196	7,125,001	13,896,797	2,481,544	119,915	24,759
1841....	7,777,586	8,136,562	15,914,148	2,943,945	173,247	27,444
1851....	8,781,225	9,146,384	17,927,609	3,278,039	153,494	26,571

TABLE IV.

Population and Number of Houses in Scotland, as enumerated at each Census from 1801 to 1851, inclusive.

Years.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
1801....	739,091	869,329	1,608,420	294,553	9,537	(no returns)
1811....	826,296	979,568	1,805,864	304,093	11,329	2,341
1821....	982,623	1,108,898	2,091,521	341,474	12,657	2,405
1831....	1,114,456	1,249,930	2,364,386	369,393	12,719	2,568
1841....	1,241,862	1,378,322	2,620,184	502,852	24,025	2,646
1851....	1,375,479	1,513,263	2,888,742	370,308	12,146	2,420

TABLE V.

Population and Number of Houses in the Islands of the British Seas, as enumerated at each Census from 1801 to 1851, inclusive.

Years.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
1801....	36,400	41,600	78,000	12,000	307	77
1811....	37,360	42,640	80,000	12,300	315	78
1821....	41,733	47,775	89,508	13,763	427	98
1831....	48,549	55,161	103,710	15,658	697	226
1841....	57,556	66,484	124,040	19,190	869	220
1851....	66,854	76,272	143,126	21,845	1,095	203

TABLE VI.

Population and Number of Houses in England, as enumerated at each Census from 1801 to 1851, inclusive.

Years.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
1801....	3,997,487	4,353,372	8,350,859	1,467,870	53,965	(no returns)
1811....	4,582,210	4,970,811	9,553,021	1,678,106	47,925	15,188
1821....	5,498,798	5,783,085	11,281,883	1,951,973	66,055	18,289
1831....	6,376,584	6,713,939	13,090,523	2,326,022	113,885	23,462
1841....	7,325,692	7,671,735	14,997,427	2,755,699	163,105	25,700
1851....	8,281,734	8,640,154	16,921,888	3,076,620	144,499	15,192

TABLE VII.

Population and Number of Houses in Wales, as enumerated at each Census from 1801 to 1851, inclusive.

Years.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
1801.....	257,248	284,429	541,677	108,053	3,511	(no returns)
1811.....	291,395	319,840	611,235	119,398	3,095	1,019
1821.....	351,521	366,832	718,353	136,183	3,652	985
1831.....	394,612	411,662	806,274	155,522	6,030	1,297
1841.....	447,764	463,941	911,705	188,246	10,142	1,744
1851.....	499,491	506,230	1,005,721	201,419	8,995	1,379

TABLE VIII.

Population and Number of Houses in each Division in Great Britain in 1851.

DIVISIONS.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
<i>England and Wales.</i>						
1. London division	1,106,558	1,255,678	2,362,236	305,933	16,643	4,815
2. South-eastern division	809,670	818,716	1,628,386	298,054	12,573	2,492
3. South-midland division	611,288	623,044	1,234,332	246,422	9,582	1,360
4. Eastern division	549,177	564,805	1,113,982	228,843	9,849	1,254
5. South-western division	866,093	937,198	1,803,291	338,986	19,423	1,886
6. West-midland division	1,054,475	1,078,455	2,132,930	418,205	20,215	2,869
7. North-midland division	603,254	611,284	1,214,538	246,645	9,139	1,491
8. North-western division	1,215,832	1,274,995	2,490,827	435,987	21,746	4,310
9. York division	888,104	900,943	1,789,047	358,663	16,542	3,226
10. Northern division	484,981	487,145	969,126	164,694	7,201	1,310
11. Welsh division	594,793	594,121	1,188,914	235,607	10,581	1,558
<i>Scotland.</i>						
12. Southern counties.....	869,445	944,117	1,813,562	194,884	7,243	1,448
13. Northern counties	506,034	569,146	1,075,180	175,424	4,903	972
14. Islands	66,854	76,272	143,126	21,845	1,095	203

TABLE IX.

Population and Number of Houses in the Districts of London in 1851.

DISTRICTS.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
<i>West Districts.</i>						
1. Kensington	49,949	70,055	120,004	17,151	1,118	813
2. Chelsea	25,475	31,063	56,538	7,591	264	98
3. St. George, Hanover Square.....	31,920	41,310	73,230	8,792	450	162
4. Westminster	32,494	33,115	65,609	6,642	281	55
5. St. Martin in the Fields	11,918	12,722	24,640	2,307	147	11
6. St. James, Westminster	17,377	1,9029	36,406	3,399	229	5
<i>North Districts.</i>						
7. Marylebone	69,115	88,581	157,696	15,826	561	58
8. Hampstead	4,960	7,026	11,986	1,719	77	26
9. St. Pancras	76,144	90,512	166,956	18,584	803	306
10. Islington	42,762	52,567	95,329	13,528	659	549
11. Hackney	25,083	33,346	58,429	9,818	506	193
<i>Central Districts.</i>						
12. St. Giles	25,832	28,382	54,214	4,700	282	14
13. Strand	21,570	22,890	44,460	3,962	244	4
14. Holborn	22,860	23,761	46,621	4,311	194	14
15. Clerkenwell	31,489	33,289	64,778	7,224	306	19
16. St. Luke	26,178	27,877	54,055	6,349	247	20
17. East London.....	21,536	22,870	44,406	4,739	198	8
18. West London	14,604	14,186	28,790	2,657	189	4
19. London City.....	27,149	28,783	55,932	7,297	1,059	17
<i>East Districts.</i>						
20. Shoreditch	52,087	57,170	109,257	15,337	702	143
21. Bethnal Green	44,081	46,112	90,193	13,298	391	127
22. Whitechapel	40,271	39,488	79,759	8,812	316	33
23. St. George in the East	23,496	24,880	48,376	6,146	182	23
24. Stepney.....	52,342	58,433	110,775	16,259	867	222
25. Poplar	23,902	23,260	47,162	6,831	330	122
<i>South Districts.</i>						
26. St. Saviour, Southwark	17,432	18,299	35,731	4,600	244	12
27. St. Olave, Southwark	9,660	9,715	19,375	2,360	75	1
28. Bermondsey	23,511	24,617	48,128	7,007	379	80
29. St. George, Southwark	25,374	26,450	51,824	6,992	421	100
30. Newington	30,255	34,561	64,816	10,458	579	168
31. Lambeth	63,673	75,652	139,325	20,447	1,100	212
32. Wandsworth.....	23,011	27,753	50,764	8,276	600	287
33. Camberwell	23,574	31,092	54,667	9,112	927	233
34. Rotherhithe	9,127	8,678	17,805	2,792	199	67
35. Greenwich	50,639	48,726	99,365	14,383	1,074	344
36. Lewisham	15,708	19,127	34,835	5,927	432	265
Total.....	1,106,558	1,255,678	2,362,236	305,933	16,643	4,815

TABLE X.

Population and Houses in each County in England and Wales in 1851.

COUNTIES.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building
ENGLAND.						
Bedford	59,911	61,537	121,478	21,673	661	127
Berks	84,927	85,138	170,065	23,481	1,397	197
Buckingham	81,074	82,619	163,723	33,196	1,206	98
Cambridge	92,699	92,706	185,405	37,226	1,629	195
Chester	222,386	233,339	455,725	85,260	4,341	845
Cornwall	171,636	183,922	355,558	67,987	4,511	317
Cumberland	96,244	99,248	195,492	36,763	1,545	239
Derby	147,737	148,347	296,081	59,371	2,498	453
Devon	269,583	297,515	567,098	98,387	6,011	751
Dorset	89,204	95,003	184,207	36,138	1,587	215
Durham	196,700	194,297	390,997	64,977	2,794	570
Essex	185,399	183,919	369,318	73,530	3,569	381
Gloucester	218,187	240,618	458,805	86,359	5,318	411
Hereford	58,114	57,375	115,489	23,890	1,191	77
Hertford	82,831	81,467	167,298	32,573	1,188	207
Huntingdon	31,933	32,250	61,183	13,285	632	64
Kent	307,041	308,725	615,766	107,748	5,460	1,267
Lancaster	991,690	1,040,146	2,031,236	349,938	17,420	3,463
Leicester	112,937	117,371	230,308	48,953	1,629	211
Lincoln	205,083	202,139	407,222	81,335	3,450	592
Middlesex	882,823	1,003,753	1,886,576	239,362	11,874	3,392
Moumouth	82,349	75,069	157,418	28,939	1,353	152
Norfolk	215,254	227,460	442,714	93,143	3,505	452
Northampton	105,981	106,396	212,380	43,942	1,538	227
Northumberland	149,515	154,053	303,568	47,737	2,064	386
Nottingham	132,263	138,164	270,427	55,019	1,502	250
Oxford	85,524	81,915	170,439	31,398	1,234	105
Rutland	11,801	11,182	22,983	4,588	153	14
Salop	114,340	115,001	229,341	45,648	2,062	116
Somerset	211,045	232,871	443,916	85,051	4,912	393
Southampton	202,014	203,356	405,370	75,238	3,513	613
Stafford	310,032	298,684	608,716	116,273	4,668	958
Suffolk	166,308	170,907	337,215	69,282	3,167	449
Surrey	225,011	358,011	683,082	108,822	5,770	1,540
Sussex	165,772	171,072	336,844	58,663	2,247	606
Warwick	232,411	242,602	475,013	96,731	4,596	992
Westmoreland	29,079	29,208	58,287	11,217	533	87
Wilts	125,728	128,493	254,221	51,667	2,250	176
Worcester	136,956	139,070	276,026	55,639	2,723	337
York (East Riding)	109,413	111,540	220,983	44,363	2,964	385
York (City)	16,977	19,326	36,303	7,677	415	91
York (North Riding)	106,710	108,501	215,214	44,146	2,313	224
York (West Riding)	659,619	665,876	1,325,495	264,302	10,970	2,507
WALES.						
Anglesey	28,101	29,226	57,327	12,121	545	134
Brecon	31,314	30,160	61,474	12,221	731	74
Cardigan	32,961	37,835	70,796	14,978	544	70
Cardmarthen	53,976	57,556	110,632	22,465	1,176	99
Cardarvon	42,978	44,892	87,870	18,005	590	132
Denbigh	45,708	45,875	92,583	19,121	812	136
Flint	34,452	35,704	68,156	14,011	798	80
Glamorgan	120,718	111,101	231,819	43,202	1,557	459
Merioneth	19,151	19,692	38,843	8,159	372	31
Montgomery	33,634	33,701	67,335	13,350	716	25
Pembroke	43,675	50,465	94,140	19,136	937	111
Radnor	12,693	12,623	24,716	4,614	217	28

TABLE XI.

Population and Number of Houses in each County in Scotland in 1851.

COUNTIES.	Population.			Houses.		
	Males.	Females.	Total.	Inhabited.	Uninhabited.	Building.
Aberdeen.....	100,255	111,777	212,032	31,743	768	173
Argyll.....	43,935	45,363	89,298	15,039	484	61
Ayr.....	92,930	96,928	189,858	23,554	824	129
Banff.....	25,575	28,596	54,171	10,662	377	62
Berwick.....	17,433	18,864	36,297	6,363	251	44
Bute.....	7,518	9,090	16,608	2,335	77	30
Caithness.....	18,329	20,380	38,709	6,952	103	54
Clackmannan.....	11,342	11,609	22,951	2,950	96	53
Dumbarton.....	22,400	22,703	45,103	4,792	238	67
Dumfries.....	37,186	40,937	78,123	13,300	412	92
Edinburgh.....	119,384	140,051	259,435	20,946	851	195
Elgin, or Moray.....	18,191	20,768	38,959	7,642	223	88
Fife.....	73,175	80,371	153,546	24,610	1,062	147
Forfar.....	88,324	102,940	191,264	22,446	725	138
Haddington.....	17,610	18,776	36,386	6,444	424	41
Inverness.....	44,961	51,539	96,500	17,536	390	79
Kincardine.....	17,008	17,590	34,598	6,636	260	40
Kinross.....	4,305	4,619	8,924	1,662	67	12
Kirkcudbright.....	20,223	22,898	43,121	7,009	225	36
Lanark.....	257,060	273,109	530,169	37,504	1,279	328
Linlithgow.....	15,194	14,941	30,135	4,059	116	10
Nairn.....	4,695	5,261	9,956	2,022	27	19
Orkney and Shetland	27,495	35,038	62,533	11,334	321	23
Peebles.....	5,364	5,374	10,738	1,796	98	11
Perth.....	66,337	72,323	138,660	22,528	852	87
Renfrew.....	75,690	85,401	161,091	10,760	300	78
Ross and Cromarty....	39,012	43,695	82,707	15,941	321	121
Roxburgh.....	25,212	26,430	51,642	7,255	224	50
Selkirk.....	4,850	4,959	9,809	1,331	25	9
Stirling.....	42,234	44,003	86,237	11,312	510	89
Sutherland.....	11,917	13,876	25,793	4,913	52	27
Wigtown.....	20,335	23,054	43,389	6,902	164	27

TABLE XII.

Population of each County in England and Wales, as enumerated at each Census from 1801 to 1851, inclusive; also Increase of Population per cent. in the half century.

COUNTIES.	Years.						Increase of Population per cent. in 50 Years.
	1801.	1811.	1821.	1831.	1841.	1851.	
ENGLAND.							
Bedford	63,393	70,218	81,052	95,483	107,936	124,478	96
Berks	110,480	119,430	132,639	146,234	161,759	170,065	51
Buckingham	108,132	118,065	135,133	146,977	156,139	163,723	51
Cambridge	89,316	101,109	122,387	143,955	161,459	185,105	107
Chester	192,305	227,031	270,098	331,391	395,660	455,725	137
Cornwall	192,281	220,525	261,045	301,306	342,159	355,558	84
Cumberland	117,230	133,665	156,124	169,262	178,038	195,492	66
Derby	161,567	185,487	213,051	237,170	272,202	296,081	83
Devon	340,308	382,778	438,417	493,908	532,959	567,098	66
Dorset	114,452	121,718	144,930	159,385	175,054	181,207	61
Durham	149,381	165,293	193,511	239,256	307,963	390,997	160
Essex	227,682	252,473	289,424	317,507	344,979	369,318	62
Gloucester	250,723	285,955	336,190	387,398	431,495	458,805	82
Hereford	88,436	93,526	102,669	110,617	113,272	115,489	31
Hertford	97,393	111,225	129,731	142,814	156,660	167,298	72
Huntingdon	37,568	42,208	48,916	53,192	58,549	61,183	71
Kent	308,667	371,701	427,224	479,558	549,353	615,766	98
Lancaster	673,486	828,499	1,052,948	1,336,854	1,667,054	2,031,236	201
Leicester	130,082	150,559	174,571	197,002	215,867	230,308	77
Lincoln	208,625	237,631	283,058	317,465	362,602	407,222	95
Middlesex	818,129	933,774	1,145,057	1,358,330	1,576,636	1,886,576	130
Monmouth	45,568	62,105	75,801	98,126	131,368	157,418	244
Norfolk	273,479	291,947	341,368	390,054	412,604	442,714	62
Northampton	131,525	141,353	163,097	179,336	199,228	212,580	61
Northumberland	168,078	183,269	212,589	236,959	266,020	303,568	79
Nottingham	140,350	162,964	186,873	225,327	249,910	270,427	93
Oxford	111,977	120,376	138,224	153,526	163,127	170,439	52
Rutland	16,300	16,380	18,187	19,385	21,302	22,983	41
Salop	169,248	181,973	198,311	213,518	225,820	229,311	36
Somerset	273,577	302,836	355,789	403,795	435,599	443,916	62
Southampton	219,290	246,511	282,897	313,976	343,682	405,370	83
Stafford	242,693	294,540	345,972	409,480	509,172	608,716	151
Suffolk	214,404	233,963	271,541	296,317	315,073	337,215	57
Surrey	268,233	323,851	399,117	486,431	581,036	683,082	151
Sussex	159,471	190,343	233,328	272,614	300,075	336,844	111
Warwick	206,798	223,906	274,482	336,645	401,793	475,013	129
Westmoreland	40,805	45,922	51,359	55,041	56,451	58,287	43
Wilts	183,820	191,853	219,574	237,244	256,280	254,221	38
Worcester	146,411	168,982	194,071	222,655	248,460	276,922	89
York (East Riding)	111,492	123,975	154,643	168,891	194,936	220,983	97
York (City)	16,816	19,099	21,711	26,260	28,842	36,303	116
York (North Riding)	158,927	170,127	188,178	192,206	204,701	215,211	35
York (West Riding)	572,168	662,575	809,363	981,609	1,163,580	1,325,195	132
WALES.							
Anglesey	33,806	37,045	45,063	48,325	50,891	57,927	68
Brecon	32,325	37,735	43,826	47,763	55,603	61,474	90
Cardigan	42,956	50,260	57,584	61,780	68,766	70,796	65
Cardiff	67,317	77,217	90,239	100,740	106,326	110,632	64
Cardarvon	41,521	49,655	58,099	66,818	81,093	87,870	111
Darby	60,299	64,249	76,428	82,665	88,178	92,583	54
Flint	39,469	45,937	53,893	60,214	66,919	68,156	72
Glanorgan	70,879	85,067	102,073	126,612	171,188	231,819	223
Merioneth	29,506	30,854	34,382	35,315	39,332	38,843	32
Montgomery	48,181	52,181	60,245	66,844	69,607	67,335	40
Pembroke	56,280	60,615	73,788	81,425	88,044	94,140	66
Radnor	19,135	20,417	22,533	24,743	25,458	24,716	29

TABLE XIII.

Population of each County in Scotland, as enumerated at each Census from 1801 to 1851, inclusive; also Increase of Population per cent. in the half century.

COUNTIES.	Years.						Increase of Population per Cent. in 50 Years.
	1801.	1811.	1821.	1831.	1841.	1851.	
Aberdeen	121,065	133,871	155,049	177,657	192,387	212,032	75
Argyll	81,277	86,541	97,316	100,973	97,371	89,298	10
Ayr	84,207	103,839	127,299	145,055	164,356	189,858	125
Banff	37,216	38,433	43,663	48,337	49,679	54,171	45
Berwick	30,206	30,893	33,385	34,048	34,438	36,297	20
Bute	11,791	12,033	13,797	14,151	15,740	16,608	41
Caithness	22,609	23,119	29,181	34,529	36,343	38,709	71
Clackmannan	10,858	12,010	13,263	14,729	19,155	22,951	111
Dumbarton	20,710	24,189	27,317	33,211	44,296	45,103	117
Dumfries	54,597	62,960	70,878	73,770	72,830	78,123	43
Edinburgh	122,597	148,607	191,514	219,345	225,454	259,435	111
Elgin, or Moray	27,760	27,967	31,398	34,498	35,012	38,959	40
Fife	93,743	101,272	114,556	128,839	140,140	153,546	64
Forfar	99,053	107,187	113,355	139,606	170,453	191,264	93
Haddington	29,986	31,050	35,127	36,145	35,886	36,386	21
Inverness	72,672	77,671	89,961	94,797	97,799	96,500	33
Kincardine	26,349	27,439	29,118	31,431	33,075	34,598	31
Kinross	6,725	7,245	7,762	9,072	8,763	8,924	33
Kirkcudbright	29,211	33,684	38,903	40,590	41,119	43,121	48
Lanark	147,692	191,291	244,387	316,819	426,972	530,169	258
Linlithgow	17,844	19,451	22,685	23,291	26,872	30,135	68
Nairn	8,322	8,496	9,268	9,354	9,217	9,956	19
Orkney and Shetland	46,824	46,153	53,124	58,239	61,065	62,533	33
Peebles	8,735	9,935	10,046	10,578	10,499	10,738	23
Perth	125,583	134,390	138,247	142,166	137,457	138,660	10
Renfrew	78,501	93,172	112,175	133,443	155,072	161,091	105
Ross and Cromarty	56,318	60,853	68,792	74,820	78,685	82,707	47
Roxburgh	33,721	37,230	40,892	43,663	46,025	51,642	53
Selkirk	5,388	5,889	6,637	6,833	7,990	9,809	82
Stirling	50,825	58,174	65,376	72,621	82,057	86,237	69
Sutherland	23,117	23,629	23,840	25,518	24,782	25,793	12
Wigtown	22,918	26,891	33,240	36,258	39,195	43,389	89

TABLE XIV.

Area of each County in England and Wales, and Density in 1851.

COUNTIES.	Area in Square Miles.	Area in Statute Acres.	Persons to a Square Mile.	Acres to a Person	Inhabited Houses to a Square Mile.	Persons to a House.
ENGLAND.						
Bedford	462	295,582	270	2.4	53	5.1
Berks	705	451,040	241	2.7	48	5.1
Buckingham	730	466,932	224	2.9	46	4.9
Cambridge	818	523,861	226	2.8	45	5.0
Chester	1,105	707,078	412	1.6	77	5.3
Cornwall	1,365	873,600	259	2.5	50	5.2
Cumberland	1,565	1,001,273	125	5.1	23	5.3
Derby	1,020	658,803	288	2.2	58	5.0
Devon	2,589	1,637,180	218	2.9	38	5.7
Dorset	987	632,025	186	3.4	37	5.1
Durham	973	622,476	399	1.6	67	6.0
Essex	1,657	1,060,549	222	2.9	44	5.0
Gloucester	1,258	805,102	304	1.8	69	5.3
Hereford	836	534,823	138	4.6	29	4.8
Hertford	611	391,141	274	2.3	53	5.1
Huntingdon	361	230,865	178	3.6	37	4.8
Kent	1,627	1,041,479	375	1.7	66	5.7
Lancaster	1,905	1,219,221	1,064	0.6	184	5.8
Leicester	803	514,164	287	2.2	61	4.7
Lincoln	2,776	1,776,738	146	4.4	29	5.0
Middlesex	281	180,168	6,683	0.1	850	7.9
Monmouth	576	368,309	272	2.4	50	5.4
Norfolk	2,116	1,354,301	209	3.1	44	4.8
Northampton	985	630,358	216	3.0	45	4.8
Northumberland	1,952	1,249,299	154	4.1	21	6.3
Nottingham	822	526,076	329	1.9	67	4.9
Oxford	739	472,887	231	2.8	47	5.0
Rutland	150	95,805	134	4.2	31	5.0
Salop	1,291	826,055	178	3.6	35	5.0
Somerset	1,636	1,047,220	271	2.4	52	5.2
Southampton	1,672	1,070,216	240	2.7	45	5.3
Stafford	1,138	728,468	535	1.2	102	5.2
Suffolk	1,481	947,681	228	2.8	47	4.9
Surrey	748	478,792	910	0.7	145	6.3
Sussex	1,461	934,851	230	2.8	40	5.7
Warwick	881	563,946	539	1.2	110	4.9
Westmoreland	758	485,432	77	8.3	15	5.2
Wiltshire	1,352	865,092	188	3.4	38	4.9
Worcester	738	472,165	375	1.7	75	5.0
York (East Riding) ..	1,201	768,119	182	3.5	37	4.9
York (City)	4	2,720	8,542	0.7	1,665	5.1
York (North Riding) ..	2,109	1,350,121	102	6.3	21	4.8
York (West Riding) ..	2,669	1,708,026	496	1.8	99	5.0
WALES.						
Anglesey	302	193,453	188	3.4	40	4.7
Brecon	719	460,158	86	7.5	17	5.0
Cardigan	693	443,387	102	6.3	22	4.7
Carmarthen	947	606,331	117	5.5	24	4.9
Carmarvon	679	370,273	151	4.2	31	4.9
Denbigh	603	386,052	153	4.2	32	4.8
Flint	289	184,905	235	2.7	49	4.8
Glamorgan	856	547,454	268	2.4	51	5.3
Merioneth	602	355,291	65	9.9	14	4.8
Montgomery	755	483,323	89	7.2	18	5.0
Pembroke	628	401,691	119	4.3	30	4.9
Radnor	425	272,128	58	11.0	11	5.4

TABLE XV.

Area of each County in Scotland, and Density in 1851.

COUNTIES.	Area in Square Miles.	Area in Statute Acres.	Persons to a Square Mile.	Acres to a Person.	Inhabited Houses to a Square Mile.	Persons to a House.
Aberdeen.....	1,970	1,260,625	108	5.9	16	6.7
Argyll.....	3,255	2,083,126	27	23.3	5	5.9
Ayr.....	1,016	650,156	187	3.4	23	8.0
Banff.....	686	439,219	79	8.1	16	5.1
Berwick.....	483	309,375	75	8.5	13	5.7
Bute.....	171	109,375	97	6.6	14	7.1
Caithness.....	712	455,708	54	11.8	10	5.6
Clackmannan.....	46	29,744	494	1.3	63	7.8
Dumbarton.....	297	189,844	152	4.2	16	9.4
Dumfries.....	1,129	722,813	69	9.3	12	5.9
Edinburgh.....	397	254,300	653	1.0	53	12.4
Elgin, or Moray.....	531	340,000	73	8.7	14	5.1
Fife.....	503	322,031	365	2.1	49	6.2
Forfar.....	889	568,750	215	3.0	25	8.5
Haddington.....	291	185,937	125	5.1	22	5.6
Inverness.....	4,256	2,723,501	23	28.2	4	5.5
Kincardine.....	394	252,250	88	7.3	17	5.2
Kinross.....	77	49,531	115	5.5	21	5.4
Kirkeudbright.....	954	610,734	45	14.2	7	6.1
Lanark.....	987	631,719	537	1.2	38	14.1
Linlithgow.....	101	64,375	300	2.1	40	7.4
Nairn.....	215	137,500	46	13.8	9	4.9
Orkney and Shetland	1,545	988,873	40	15.8	7	5.5
Peebles.....	354	226,488	30	21.1	5	6.0
Perth.....	2,835	1,814,063	49	13.1	8	6.2
Renfrew.....	234	150,000	687	0.9	46	14.9
Ross and Cromarty....	3,151	2,016,375	26	24.4	5	5.2
Roxburgh.....	720	460,938	72	8.9	10	7.1
Selkirk.....	266	170,313	37	17.4	5	7.4
Stirling.....	462	295,875	187	3.4	24	7.6
Sutherland.....	1,886	1,207,188	14	46.8	3	5.2
Wigtown.....	511	326,736	85	7.5	14	6.3

TABLE XVI.

Population of the Islands in the British Seas containing upwards of 100 Inhabitants in 1851.

Islands.	Population.	Islands.	Population.
Anglesey	57,318	Lismore	1,250
Arran	5,857	Mull	7,485
Alderney	3,333	Mickleroe	290
Bute.....	9,351	Mingala	114
Benbecula	1,718	North Uist	3,093
Barra	1,624	North Ronaldsay.....	526
Bressay	885	Orkney	16,668
Burray	559	Papa Westray	371
Bernera (Harris).....	452	Papa Stour	359
Balishear	156	Rousay	937
Bareray	150	Rasay	540
Bryher (Scilly)	118	Rona	165
Coll	1,109	Rum	162
Collonsay and Aronsay	837	Skye.....	21,528
Canna	240	Shetland	20,936
Eday	947	South Uist	4,006
Easdale	571	South Ronaldsay.....	2,465
Eigg.....	461	Sanday.....	2,004
Erlskey	405	St. Mary (Scilly)	1,668
East Burra	204	Stronsay	1,176
Egilsay	192	Shapinsay	899
Fetlar	658	Serk	580
Flotta	389	Scalpay	282
Fair	280	Stroma.....	211
Fould	240	St. Martin (Scilly)	211
Guernsey.....	29,757	St. Agnes (Scilly)	204
Great Cumbray	1,266	Soay.....	158
Gigha	540	St. Michael's Mount	147
Greensay.....	286	Scarp	145
Grimsay	268	Shona	118
Holy Island.....	908	Skerries	105
Hoy	329	Tyre	3,709
Hirta, or St. Kilda.....	110	Treseo (Scilly).....	416
Isle of Man	52,344	Trondray	169
Isle of Wight	50,324	Unst	2,961
Islay	12,334	Ulva.....	204
Iona, or Icolinkill	604	Westray	2,038
Jersey	57,020	Whalsay	679
Jura	1,064	West Burra.....	410
Kerera	164	Walney	306
Lewis	22,918	Yell	2,696

TABLE XVII.

Population and Number of Inhabited Houses in the Cities, Boroughs, and Principal Towns in England and Wales in 1851.

NOTE.—The letters denote—M. Municipal limits; P. Parliamentary limits; and M. & P. Municipal and Parliamentary limits the same.

City, Borough, or Town.	Population.	Inhabited Houses.	City, Borough, or Town.	Population.	Inhabited Houses.
Aberavon	P. 6,567	1,106	Bicester	2,763	566
Abergavenny	4,797	944	Bideford	M. 5,775	1,101
Aberystwith	M. & P. 5,231	958	Biggleswade	3,976	774
Abingdon	M. & P. 5,954	1,244	Bingley	5,019	961
Accrington	7,481	1,414	Birkenhead	24,285	3,228
Adpar	P. 1,746	369	Birmingham	M. & P. 232,841	45,844
Alcester	2,027	439	Bishop Auckland	4,400	839
Alford	2,262	483	Bishop Stortford	5,280	907
Alnwick	6,231	835	Blackburn	M. & P. 46,536	7,919
Alston	2,005	413	Blackpool	2,180	410
Alton	2,828	530	Blandford	M. 2,504	453
Altrincham	4,488	874		Town 3,913	708
Amersham	2,093	389	Blyth	2,060	265
Amlwch	P. 3,169	751	Bodmin	M. 4,327	722
Andover	M. 5,187	1,040		P. 6,337	1,103
	P. 5,395	1,079	Bolton	M. & P. 61,171	10,394
Arundel	M. & P. 2,748	552		M. 14,733	2,992
Ashborne	2,418	518	Boston	P. 17,518	3,622
Ashburton	P. 3,432	622	Bourn	2,789	584
Ashby-de-la-Zouch	3,762	798	Brackley	2,157	430
Ashford	4,092	737	Bradford (Wilts)	4,240	973
Ashton-under-Lyne	M. 30,676	5,501	Bradford (Yorkshire)	M. & P. 103,778	19,002
	P. 29,791	5,346	Braintree	2,836	609
Atherton	4,655	963	Brampton	3,074	557
Aylesbury	P. 26,794	5,472	Brandon	2,022	436
Aylsham	2,184	495	Brecknock	M. 5,673	1,147
Banbury	M. 4,026	769		P. 6,070	1,236
	P. 8,715	1,721	Brentford	8,870	1,750
Bangor	P. 6,338	1,228	Brentwood	2,205	444
Barking	4,930	968	Bridgnorth	M. 6,172	1,227
Barnard Castle	4,357	644		P. 7,610	1,516
Barnsley	13,437	2,620	Bridgwater	M. & P. 10,317	1,911
Barnstaple	M. & P. 11,371	2,116	Bridlington	2,432	504
Barton-upon-Humber	3,866	860	Bridport	M. & P. 7,566	1,468
Basingstoke	M. 4,263	892	Brigg	3,097	603
Bath	M. & P. 54,240	7,744	Brighton	P. 69,673	10,843
Beaminster	2,085	456	Bristol	M. & P. 137,328	20,873
Beaumaris	M. & P. 2,599	480	Brixham	5,627	1,179
Beaumaris District of			Bromsgrove	4,426	615
Boroughs	P. 12,752	2,592	Buckingham	M. 4,020	809
Beccles	M. 4,398	954		P. 8,069	1,717
Bedford	M. & P. 11,693	2,307	Bungay	3,841	852
Bedworth	3,012	639	Burnley	20,828	3,741
Belper	10,082	1,987	Burton-upon-Trent	7,934	1,604
Berkhampstead, Great	2,943	553	Bury	P. 31,262	5,825
Berwick-upon-Tweed	M. & P. 15,094	2,028	Bury St. Edmunds'	M. & P. 13,900	2,752
Beverley	M. 8,915	1,934	Caergwyle	P. 719	165
	P. 10,058	2,183	Caerwys	P. 635	142
Bewdley	M. 3,124	718	Calne	M. 2,544	475
	P. 7,318	1,582		P. 5,195	1,047

TABLE XVII.—Continued.

Population and Number of Inhabited Houses in the Cities, Boroughs, and Principal Towns in England and Wales in 1851.

City, Borough, or Town.	Population.	Inhabited Houses.	City, Borough, or Town.	Population.	Inhabited Houses.
Camborne	6,547	1,174	Cricklade	P. 35,503	7,197
Cambridge	M. & P. 27,815	5,194	Crowland	2,466	531
Canterbury	M. & P. 18,393	3,654	Crowle	2,245	496
Cardiff	M. & P. 18,351	2,565	Croydon	10,260	1,650
Cardiff District of } Boroughs	P. 20,424	3,034	Cullompton	2,765	607
Cardigan	M. & P. 3,876	922	Darlington	11,228	1,921
Cardigan District of } Boroughs	P. 11,760	2,436	Dartford	5,763	1,033
Carlisle	M. & P. 26,310	3,956	Dartmouth	M. & P. 4,508	799
Carmarthen	M. & P. 10,524	1,800	Darwen Over	7,020	1,302
Carmarthen District } of Boroughs	P. 19,231	3,454	Daventry	M. 4,430	889
Carnarvon	M. & P. 8,674	1,723	Dawlish	2,671	543
Carnarvon District of } Boroughs	P. 22,210	4,581	Deal	M. 7,067	1,465
Castle Donington	2,729	615	Denbigh	M. & P. 5,498	1,215
Cefnlllys	P. 45	6	Denbigh District of } Boroughs	P. 16,614	3,458
Chard	M. 2,291	441	Derby	M. & P. 40,609	8,199
Chatham	P. 28,424	4,337	Dereham	3,372	738
Cheadle	2,728	533	Devizes	M. & P. 6,554	1,292
Chelmsford	6,033	1,201	Devonport	M. 38,180	3,789
Cheltenham	P. 35,051	6,356	Devonport	P. 50,159	4,961
Chepstow	4,295	723	Dewsbury	5,033	992
Chertsey	2,743	523	Diss	2,419	494
Chesham	2,496	516	Dolgelly	2,041	519
Chester	M. & P. 27,766	5,173	Doncaster	M. 12,052	2,583
Chesterfield	M. 7,101	1,455	Dorchester	M. & P. 6,394	960
Chichester	M. & P. 8,662	1,653	Dorking	3,490	612
Chippenham	M. 1,707	309	Dover	M. & P. 22,244	3,747
Chippenham	P. 6,283	1,139	Downham	2,867	585
Chipping Norton	M. 2,932	563	Downton	2,727	571
Chipping Wycombe	M. 3,588	690	Driffield, Great	3,792	811
Chorley	P. 7,179	1,441	Droitwich	M. 3,125	582
Chorley	8,907	1,545	Droitwich	P. 7,096	1,407
Christchurch	P. 7,475	1,543	Dudley	P. 37,962	7,119
Cirencester	P. 6,096	1,211	Dunstable	3,589	688
Clitheroe	M. 7,244	1,371	Durham	M. & P. 13,188	1,768
Clitheroe	P. 11,480	2,192	Dursley	2,617	552
Cockermouth	P. 7,275	1,506	East Retford	M. 2,943	587
Coggeshall	3,484	747	East Retford	P. 46,054	9,643
Colchester	M. & P. 19,413	4,145	Eccles	4,108	746
Colne	6,644	1,281	Ellesmere	2,087	418
Congleton	M. 10,520	2,146	Ely	6,176	1,302
Conway	P. 2,105	429	Epsom	3,390	544
Covertry	M. 36,208	7,657	Evesham	M. & P. 4,605	918
Covertry	P. 36,812	7,783	Exeter	M. 32,818	5,109
Cowbridge	P. 1,066	224	Exeter	P. 40,688	6,499
Cowes	4,786	814	Exmouth	5,123	1,042
Crediton	3,934	864	Eye	M. 2,587	480
Crewe	4,491	805	Eye	P. 7,531	1,374
Crewkerne	3,303	614	Falmouth	M. 4,953	600
Criccieth	P. 530	118	Falmouth and Penryn } Fareham	P. 13,656	2,143
			Faringdon, Great	3,451	687
			Farnham	2,456	492
				3,515	693

TABLE XVII.—Continued.

Population and Number of Inhabited Houses in the Cities, Boroughs, and Principal Towns in England and Wales in 1851.

City, Borough, or Town.	Population.	Inhabited Houses.	City, Borough, or Town.	Population.	Inhabited Houses.
Faversham	M. 4,595	895	Hexham	4,601	531
Finsbury	P. 323,772	37,427	Heywood	12,194	2,426
Fishguard	P. 1,757	433	Hinckley	6,111	1,350
Fleetwood-on-Wyre	3,121	446	Hindley	5,285	950
Flint	M. & P. 3,296	693	Hitchin	5,258	982
Flint District of Bo- roughs	P. 18,814	3,963	Holbeach	2,245	412
Folkestone	M. 6,726	1,149	Holt	P. 1,029	213
Frodsham	2,099	376	Holyhead	P. 5,622	1,040
Frome	P. 10,148	2,122	Holywell	P. 5,710	1,190
Gainsborough	7,506	1,561	Honiton	M. & P. 3,427	692
Gateshead	M. & P. 25,568	3,520	Horncastle	4,921	1,015
Glastonbury	M. 3,125	690	Horsham	P. 5,947	1,681
Gloucester	M. & P. 17,572	2,843	Horwich	2,104	382
Godalming	M. 2,218	479	Houghton-le-Spring	3,224	591
Godmanchester	M. 2,337	519	Hounslow	3,514	761
Goole	4,722	884	Howden	2,235	497
Gosport	7,414	1,465	Huddersfield	P. 30,880	5,759
Grantham	M. 5,375	904	Hull	M. & P. 84,690	16,634
Gravesend	P. 10,873	1,968	Hungerford	2,255	411
Great Berkhamstead	M. 16,633	2,722	Huntingdon	M. 3,882	725
Great Bradford	2,943	553	Hyde	P. 6,219	1,214
Great Driffield	4,240	973	Hythe	10,051	1,802
Great Faringdon	3,792	811	Hythe	M. 2,857	486
Great Grimsby	P. 2,456	492	Ilfracombe	P. 13,161	2,261
Great Marlow	M. 8,860	1,634	Ipswich	2,919	623
Great Yarmouth	P. 12,263	2,354	Ipswich	M. & P. 32,914	6,979
Greenwich	P. 6,523	1,211	Keighley	13,050	2,492
Grimsby Great	M. & P. 30,879	6,886	Kendal	M. & P. 11,829	2,457
Guildford	P. 105,784	15,401	Kenfigg	P. 433	89
Hadleigh	M. 8,860	1,634	Kenilworth	3,140	692
Halesowen	P. 12,263	2,354	Keswick	2,618	552
Halesworth	M. & P. 6,740	1,176	Kettering	5,125	1,046
Halstead	M. 3,338	672	Kidderminster	M. & P. 18,162	3,656
Harrogate	2,412	476	Kings Lynn	M. & P. 19,355	3,845
Hartlepool	P. 2,529	545	Kingston-upon-Hull	M. & P. 84,690	16,634
Harwich	M. & P. 33,582	6,528	Kingston-upon-Thames	M. 6,279	1,119
Haslingden	M. 5,658	1,236	Kirkham	2,777	517
Hastings	P. 3,678	763	Knaresborough	P. 5,536	1,326
Haverfordwest	M. 9,503	1,466	Knights	P. 1,388	292
Haverfordwest Dis- trict of Boroughs	M. & P. 4,451	751	Knucklas	P. 251	55
Helston	M. 6,154	1,169	Knutsford	3,127	603
Hemel Hempstead	M. 16,956	2,471	Lambeth	P. 251,345	39,154
Henley-on-Thames	P. 17,011	2,477	Lampeter	P. 907	187
Hertford	M. & P. 6,580	1,281	Lancaster	M. 14,604	2,583
	P. 9,729	1,995	Launceston	P. 16,168	2,891
	M. 3,355	672		M. 3,397	562
	P. 7,328	1,459		P. 6,095	1,051
	2,727	509	Leamington	15,692	2,732
	3,369	667	Ledbury	3,027	584
	M. & P. 12,108	2,426	Leeds	M. & P. 172,270	36,165
	M. & P. 6,605	1,150	Leek	8,877	1,759
			Leicester	M. & P. 60,584	12,805
			Leigh	5,206	956

TABLE XVII.—Continued.

Population and Number of Inhabited Houses in the Cities, Boroughs, and Principal Towns in England and Wales in 1851.

City, Borough, or Town.	Population.	Inhabited Houses.	City, Borough, or Town.	Population.	Inhabited Houses.
Leighton Buzzard.....	4,465	851	Melton Mowbray.....	4,391	835
Leominster.....	M. & P. 5,214	1,118	Merthyr Tydfil.....	P. 63,080	11,681
Lewes.....	P. 9,533	1,747	Middlesborough.....	7,431	1,262
Lichfield.....	M. & P. 7,012	1,412	Middleton.....	5,740	1,179
Lincoln.....	M. & P. 17,536	3,450	Midhurst.....	P. 7,021	1,200
Liskeard.....	M. 4,386	623	Milford.....	P. 2,837	497
.....	P. 6,204	965	Mold.....	P. 3,432	719
Littlhampton.....	2,436	466	Monmouth.....	M. & P. 5,710	1,110
Liverpool.....	M. & P. 375,955	54,310	Monmouth District of Boroughs.....	P. 26,512	4,327
Llandoverly.....	M. 1,927	391	Montgomery.....	P. 1,248	260
Llan Rhy.....	P. 8,710	1,651	Montgomery District of Boroughs.....	P. 17,887	3,871
Llan'tyllin.....	P. 1,116	246	.....	M. 4,096	559
Llangefni.....	P. 1,362	321	.....	P. 10,012	1,467
Llanidloes.....	M. & P. 3,045	652	Morpeth.....	P. 5,426	1,120
Llantrisant.....	P. 1,007	245	Nantwich.....	P. 1,392	281
London.....	M. & P. 127,869	14,580	Narberth.....	P. 1,392	281
Longtown.....	2,142	372	Neath.....	M. & P. 5,841	1,133
Loughborough.....	10,960	2,324	Nevin.....	P. 1,854	448
Loughor.....	P. 821	171	Newark.....	M. & P. 11,330	2,370
Louth.....	M. 10,467	2,209	Newbury.....	M. 6,574	1,362
Lowestoft.....	6,580	1,265	Newcastle-under-Lyme	M. & P. 10,559	2,153
Ludlow.....	M. 4,691	1,003	Newcastle-upon-Tyne	M. & P. 87,784	10,441
.....	P. 5,376	1,133	New Malton.....	P. 7,661	1,545
Luton.....	10,648	1,959	Newmarket.....	3,356	631
Lutterworth.....	2,446	545	Newport (Hants).....	M. & P. 8,047	1,550
.....	M. 2,661	522	Newport (Monmouth)	M. & P. 19,323	2,908
Lyme Regis.....	P. 3,516	708	Newport (Salop).....	2,905	553
.....	M. 2,651	487	Newport Pagnell.....	3,312	765
Lymington.....	P. 5,282	1,029	New Radnor.....	P. 2,315	467
.....	M. & P. 39,048	8,312	New Radnor District of Boroughs.....	P. 6,653	1,381
Macclesfield.....	P. 1,673	357	New Shoreham.....	P. 30,553	5,421
Machynlleth.....	M. 3,607	676	Newton Abbot.....	P. 3,147	584
Maidenhead.....	M. 20,740	3,667	.....	P. 6,371	1,421
Maidstone.....	P. 20,801	3,676	Newtown.....	P. 4,995	1,064
.....	M. 4,558	902	Northallerton.....	P. 4,995	1,064
Maldon.....	P. 5,888	1,179	Northampton.....	M. & P. 26,657	4,886
Malmsbury.....	P. 6,958	1,420	Norwich.....	M. & P. 68,195	14,988
Malton.....	P. 7,661	1,545	Nottingham.....	M. & P. 57,407	11,549
.....	M. 303,382	50,731	Nuneaton.....	4,859	1,123
Manchester.....	P. 316,213	53,204	Oakham.....	2,800	570
.....	10,012	2,141	Oldbury.....	5,114	907
Mansfield.....	4,171	731	.....	M. 52,820	9,900
March.....	9,107	1,825	Oldham.....	P. 72,357	13,658
Market Harborough.....	2,325	480	Ormskirk.....	5,548	911
.....	M. 3,908	608	Oswestry.....	M. 4,817	995
Marlborough.....	P. 5,135	781	Otley.....	4,522	846
Marlow, Great.....	P. 6,523	1,211	Ottery St. Mary.....	2,534	536
Marylebone.....	P. 370,957	10,513	Oundle.....	2,689	545
Maryport.....	5,698	1,212	Over Darwen.....	7,020	1,302
Melbourne.....	2,227	495	Overton.....	P. 1,479	310
M. & P. Weymouth Regis and Weymouth.....	M. & P. 9,458	1,722	Oxford.....	M. & P. 27,843	4,933
Melksham.....	2,931	648	Penbroke.....	M. & P. 10,107	1,792

TABLE XVII.—Continued.

Population and Number of Inhabited Houses in the Cities, Boroughs, and Principal Towns in England and Wales in 1851.

City, Borough, or Town.	Population.	Inhabited Houses.	City, Borough, or Town.	Population.	Inhabited Houses.
Pembroke District of Boroughs	P. 16,700	2,930	St. Albans*	M. & P. 7,000	1,361
Penrith	6,668	1,307	St. Asaph	P. 2,041	431
Penryn	M. 3,959	779	St. Austell	3,565	697
Penryn and Falmouth..	P. 13,656	2,143	St. Helens	14,866	2,291
Penzance	M. 9,214	1,878	St. Ives (Cornwall)..	M. 6,525	1,403
Pershore	2,717	565	St. Ives (Hunts)	P. 9,872	2,003
Peterborough	P. 8,672	1,755	St. Neots	3,522	730
Petersfield	P. 5,550	1,072	St. Neots	2,951	603
Petworth	2,427	436	Salford	M. 63,850	11,447
Pickering	2,511	552	Salford	P. 85,108	15,312
Plymouth	M. & P. 52,221	5,171	Salisbury	M. & P. 11,657	2,311
Pocklington	2,546	559	Sandbach	2,752	553
Pontefract	M. 5,106	1,069	Sandwich	M. 2,966	602
Pontypool	P. 11,515	2,496	Sandwich and Deal	P. 12,710	2,474
Poole	M. & P. 9,255	1,903	Scarborough	M. & P. 12,915	2,838
Portsmouth	M. & P. 72,096	12,825	Selby	5,109	1,079
Prescot	7,393	1,209	Shaftesbury	M. 2,503	481
Presteigne	P. 1,617	345	Shaftesbury	P. 9,404	1,894
Preston	M. & P. 69,542	11,348	Sheerness	8,549	1,458
Pwllheli	M. & P. 2,709	635	Sheffield	M. & P. 135,310	27,099
Radcliffe	5,002	927	Shepton Mallet	3,885	825
Radnor New, District of Boroughs	P. 6,653	1,381	Sherborne	3,878	732
Ramsey	2,641	583	Shoreham, New	P. 30,553	5,421
Ramsgate	11,838	2,022	Shrewsbury	M. & P. 19,681	3,900
Reading	M. & P. 21,456	4,098	Sidmouth	2,516	496
Redruth	P. 7,095	1,232	Skipton	4,962	979
Reigate	P. 4,927	792	Sleaford	3,729	747
Retford, East	M. 2,943	587	Soham	2,756	640
Rhayader	P. 1,007	216	Southampton	M. & P. 35,305	5,749
Rhuddlan	P. 1,472	313	Southmolton	M. 4,482	929
Richmond (Surrey)	9,055	1,534	South Petherton	2,165	439
Richmond (York)	M. 4,106	843	Southport	4,765	878
Ripon	P. 4,969	1,032	South Shields	M. & P. 28,974	3,439
Rochdale	M. & P. 6,080	1,345	Southwark	P. 172,863	23,751
Rochester	M. & P. 14,938	2,549	Southwell	3,516	724
Romford	3,791	767	Southwold	M. 2,109	501
Romsey	M. 2,680	431	Sowerby Bridge	4,365	867
Ross	2,674	517	Spalding	7,627	1,503
Rotherham	6,325	1,269	Stafford	M. & P. 11,829	1,977
Rugby	6,317	1,163	Staines	2,439	469
Rugeley	3,054	569	Stalybridge	20,760	3,670
Runcorn	8,049	1,591	Stamford	M. & P. 8,933	1,616
Ruthin	M. & P. 3,373	768	Stockport	M. & P. 53,835	10,568
Ryde	7,147	1,265	Stockton	M. 1,867	342
Rye	M. 4,071	726	Stockton	Town 9,808	1,907
Saffron Waldon	P. 8,541	1,557	Stoke-upon-Trent	P. 84,027	15,562
	M. 5,911	1,173	Stone	3,443	666
			Stourbridge	7,847	1,523
			Stowmarket	3,161	657
			Stratford	10,586	1,817
			Stratford-on-Avon	M. 3,372	694
			Stroud	P. 36,535	8,182

* St. Albans, by its disfranchisement since the Census was taken, has become a Municipal Borough only.

TABLE XVII.—Continued.

Population and Number of Inhabited Houses in the Cities, Boroughs, and Principal Towns in England and Wales in 1851.

City, Borough, or Town.	Population.	Inhabited Houses.	City, Borough, or Town.	Population.	Inhabited Houses.
Sudbury.....	M. 6,043	1,280	Wareham.....	P. 7,218	1,351
Sunderland.....	M. 63,897	7,975	Warminster.....		872
Swaffham.....	P. 67,394	8,519	Warrington.....	M. 22,894	4,285
Swanage.....		764		P. 23,363	4,380
Swansea.....		485	Warwick.....	M. & P. 10,973	2,229
Swansea Dist. of Boros.	M. & P. 31,461	6,001	Watford.....		790
Tadcaster.....	P. 45,123	8,491	Wednesbury.....		11,914
Tamworth.....		592	Wellingborough.....		5,061
Taunton.....	M. 4,059	826	Wellingington (Salop) ...		4,601
Tavistock.....	P. 8,655	1,760	Wellington (Somerset)		3,926
Teignmouth.....		2,645	Wells.....	M. & P. 4,736	906
Tenby.....	P. 11,176	1,009	Wells-next-the-Sea ...		3,633
Tenterden.....	P. 8,086	990	Welshpool.....	M. 6,564	1,376
Tethury.....		499		P. 4,434	935
Tewkesbury.....	M. & P. 2,982	499	Wenlock.....	M. 18,728	3,810
Thame.....	M. 3,901	708		P. 20,588	4,165
Thetford.....		539	Westbury.....	P. 7,029	1,535
Thirsk.....	M. & P. 5,878	1,274	Westminster.....	P. 241,611	24,755
Thorne.....		544	Weymouth and Mel-	M. & P. 9,458	1,722
Tiverton.....	M. & P. 4,075	844	combe Regis.....		
Todmorden.....	P. 5,319	1,154	Whitby.....	P. 10,989	2,239
Topsham.....		664	Whitechurch.....		3,619
Torquay.....	M. & P. 11,144	2,181	Whitehaven.....	P. 18,916	3,627
Torrington.....		920	Whitstable.....		3,086
Totnes.....		563	Whittlesey.....		5,472
Towcester.....	M. 7,993	1,097	Wigan.....	M. & P. 31,941	5,686
Tower Hamlets.....		666	Wigton.....		4,244
Tramere.....	M. & P. 3,308	728	Wilton.....	P. 8,607	1,721
Fredegar.....		547	Wimborne.....		2,295
Tring.....	P. 539,111	75,710	Wincheomb.....		2,052
Trowbridge.....		1,187	Winchester.....	M. & P. 13,704	2,077
Truro.....		1,495	Windsor.....	M. & P. 9,596	1,417
Tanbridge.....		610	Wirksworth.....		2,632
Tanbridge Wells.....	M. & P. 10,157	2,080	Wisbeach.....	M. 10,594	2,141
Tydesley.....		2,191	Wiston.....	P. 774	142
Tyngmouth.....		827	Witney.....		3,099
Ulverstone.....		1,868	Wokingham.....		2,272
Uppingham.....	M. & P. 4,539	658	Wolverhampton.....	M. 49,985	9,184
Upwell.....		4,295		P. 119,748	22,284
Usk.....		1,249	Woodbridge.....		5,161
Utttoxeter.....		405	Woodstock.....	P. 7,983	1,623
Uxbridge.....	P. 2,091	490	Worcester.....	M. & P. 27,528	5,695
Venstor.....		309	Workington.....		5,837
Wakfield.....		730	Worksop.....		6,058
Wallingford.....		627	Worthing.....		5,370
Walsall.....	M. 22,065	4,391	Wrexham.....	P. 6,714	1,262
Waltham Abbey.....		4,390	Wycombe, Chipping {	M. 3,588	690
Wantage.....	P. 22,057	522		P. 7,179	1,441
Ware.....		1,635	Wymondham.....		2,970
	M. & P. 25,680	4,921	Yarmouth.....	M. & P. 30,879	6,886
		461	Yeovil.....		5,985
		625		M. 36,303	7,077
		993	York.....	P. 40,359	7,778

TABLE XVIII.

Population and Number of Inhabited Houses in the Cities, Burghs, and Principal Towns in Scotland in 1851.

NOTE.—The letters denote—M. Municipal limits; P. Parliamentary limits; and M. & P. Municipal and Parliamentary limits the same.

City, Burgh, or Town.	Population.	Inhabited Houses.	City, Burgh, or Town.	Population.	Inhabited Houses.
Aberdeen.....	M. 53,808	3,889	Dalkeith	5,086	462
	P. 71,973	5,839	Dalry	2,706	240
Airdrie	M. & P. 14,435	1,239	Denny	2,446	261
Alexandria	3,781	306	Dingwall	M. & P. 1,990	314
Alloa	6,676	618	Dornoch	M. & P. 599	169
Alva	3,058	330	Dumbarton	M. 4,590	274
Annan	M. 4,570	829		P. 5,445	313
	P. 3,426	611	Dumfries	M. 11,107	1,373
Anstruther Easter.....	M. & P. 1,161	194		P. 13,166	1,582
Anstruther Wester	M. & P. 365	53	Dumfries District of	P. 22,752	3,151
Arbroath	M. 8,302	855	Burghs		
	P. 16,986	1,734	Dunbar	M. 2,965	394
Ardrossan	2,071	170		P. 3,038	405
Auchterarder	2,520	325	Dundee	M. 61,449	3,548
Auchtermuchty	M. 2,673	561		P. 78,931	5,040
Ayr	M. 9,110	1,040	Dunfermline	M. 8,577	883
	P. 17,624	1,855		P. 13,836	1,487
Ayr District of Burghs	P. 34,844	3,569	Dunoon	2,229	345
Banff	M. 3,557	615	Dunse	2,567	392
	P. 6,000	1,073	Duntocher	2,446	183
Bannockburn.....	2,627	345	Dysart	M. 1,610	198
Barrhead	6,069	348		P. 8,041	1,064
Bathgate	3,341	354	Earlsferry.....	M. 436	89
Beith	4,012	326	Edinburgh	M. 66,734	2,789
Bervie or Inverbervie	M. 878	159		P. 160,302	7,786
	P. 934	171	Elgin	M. 5,383	926
Blairgowrie	2,914	387		P. 6,337	1,091
Bonhill	2,327	166	Elgin District of	P. 24,072	3,837
Borrowstownness	2,645	171	Burghs		
Brechin	M. 4,515	520	Falkirk.....	M. & P. 8,752	949
	P. 6,637	758	Falkirk District of	P. 42,038	4,104
Broughtyferry	2,772	460	Burghs		
Buckie	2,789	532	Falkland	M. 1,330	231
Burntisland	M. 2,329	212	Ferryport-on-Craig	2,051	331
	P. 2,724	293	Forfar	M. & P. 9,311	1,023
Calderbank	2,872	206		M. 3,339	690
Campbeltown	M. & P. 6,880	653		P. 3,468	713
Carlisle	2,845	355	Forres.....	M. & P. 1,148	228
Coatbridge.....	8,364	955	Fraserburgh.....	3,093	395
Coldstream	2,238	281	Gallashiels.....	5,918	562
Coupar-Angus	2,004	368	Galloway, New	M. & P. 447	88
Craik	M. & P. 1,247	259	Galston	2,538	253
Crieff	3,824	539	Girvan	7,319	982
Cromarty	M. & P. 1,988	327	Glasgow	M. 148,116	5,691
	M. 3,165	642		P. 329,097	11,965
Cullen	P. 1,697	356	Govan	3,131	296
Culross	M. & P. 605	110	Greenock	M. & P. 36,689	1,714
Cumnock, Old	2,395	360		M. 2,887	353
Cupar	M. 4,003	526		P. 3,883	473
	P. 5,686	761	Haddington		

TABLE XVIII.—Continued.

Population and Number of Inhabited Houses in the Cities, Burghs, and Principal Towns in Scotland in 1851.

City, Burgh, or Town.	Population.	Inhabited Houses.	City, Burgh, or Town.	Population.	Inhabited Houses.
Haddington District of Burghs	P. 12,504	1,607	Leith	M. & P. 30,919	2,084
Hamilton	M. & P. 9,630	967	Leith District of Burghs	P. 41,508	3,555
Hawick	6,683	456	Lennoxton	3,108	229
Helensburgh	2,811	362	Lerwick	2,904	331
Huntly	3,131	564	Leven	2,083	338
Inverary	M. 1,164	113	Linlithgow	M. 4,071	328
	P. 1,064	94		P. 4,213	348
Inverbervie	M. 878	159	Lochmaben	M. 1,498	288
	P. 934	171		P. 1,092	222
Inverkeithing	M. 1,497	206	Lochwinnoch	2,271	213
	P. 1,852	240	Maybole	3,862	394
Inverness	M. 9,969	1,255	Montrose	M. 14,328	1,336
	P. 12,793	1,704		P. 15,238	1,473
Inverness District of Burghs	P. 20,386	3,212	Montrose District of Burghs	P. 49,106	5,159
Inverury	M. 2,084	316	Musselburgh	M. & P. 7,092	890
	P. 2,261	340		M. 3,401	646
Irvine	M. 4,790	533	Nairn	P. 2,977	562
	P. 7,534	811	Neilston	2,075	118
Jedburgh	M. 2,948	311	Newburgh	M. 2,638	292
	P. 3,615	402	New Galloway	M. & P. 447	88
Johnstone	5,872	311	Newmilns	2,211	220
Keith	2,101	446	Newton Stewart	2,599	411
Kelso	4,783	491	North Berwick	M. 498	72
Kilbarchan	2,467	220		P. 863	133
Kilbirnie	3,399	186	Oban	M. & P. 1,742	156
Kilmarnock	M. 19,201	1,374	Old Cumnock	2,395	360
	P. 21,443	1,652	Paisley	M. 31,752	1,662
Kilmarnock District of Burghs	P. 43,365	3,263		P. 47,952	2,647
Kilrenny	M. & P. 1,862	251	Peebles	M. 1,982	310
Kilsyth	3,949	422		M. 14,681	1,170
Kilwinning	3,265	360		P. 23,835	1,991
Kincardine	2,697	513	Peterhead	M. 4,819	593
	M. 1,377	158		P. 7,298	886
Kinghorn	P. 1,568	174	Pittenweem	M. & P. 1,450	264
Kinross	2,590	389	Pollockshaws	6,086	387
Kintore	M. & P. 476	91	Port Glasgow	M. & P. 6,986	418
Kirkcaldy	M. 5,093	422	Portobello	M. & P. 3,497	581
	P. 10,475	894	Portsoy	2,062	431
Kirkcaldy District of Burghs	P. 22,808	2,425	Queensferry	M. 720	87
	M. 2,778	414		P. 1,195	142
Kirkcudbright	P. 2,687	397	Renfrew	M. 2,722	295
Kirkintilloch	6,342	512		P. 2,977	317
Kirkwall	M. 2,448	333	Renton	2,398	218
	P. 3,451	457	Rothsay	M. 7,104	632
Kirriemuir	3,518	498		M. 6,947	605
	M. 5,304	651	Rutherglen	P. 6,514	563
Lanark	P. 5,008	601	St. Andrews	M. 4,730	599
Largs	2,824	392		P. 5,107	675
Lauder	M. & P. 1,105	194	St. Andrews District of Burghs	P. 16,878	2,457
			Saltcoats	4,338	537

TABLE XVIII.—*Continued.*

Population and Number of Inhabited Houses in the Cities, Burghs, and Principal Towns in Scotland in 1851.

City, Burgh, or Town.	Population.	Inhabited Houses.	City, Burgh, or Town.	Population.	Inhabited Houses.
Sanquhar.....	M. 1,884	282	Tain	M. 2,588	450
.....	P. 2,381	339	.....	P. 2,049	349
Selkirk	M. 3,314	380	Thurso	2,968	417
Stevenston	2,095	272	Tillicoultry	3,217	268
Stewarton	3,164	313	Tranent.....	2,096	365
Stirling.....	M. 9,361	767	Troon	2,404	209
.....	P. 12,837	1,270	Whithorn	M. & P. 1,652	291
Stirling District of	P. 30,325	3,249	Wick	M. 1,514	171
Burghs .....			.....	P. 6,722	885
Stonehaven	3,240	484	Wick District of	P. 16,799	2,411
Stonehouse	2,086	311	Burghs		
Stornoway	2,391	291	Wigtown	M. 2,232	339
Stranraer.....	M. 3,877	523	.....	P. 2,121	323
.....	P. 5,738	793	Wigtown District of	P. 9,958	1,455
Strathaven.....	4,274	448	Burghs		
Stromness	2,655	379	Wishawton	3,373	363

TABLE XIX.

Number of each class of Public Institutions in England and Wales, Scotland, and the Islands in the British Seas, and the Number of Persons inhabiting them, in 1851.

ENGLAND AND WALES.				
Class of Institution.	Number.	Persons Inhabiting them.		
		Males.	Females.	Total.
Barracks	152	40,829	7,738	48,567
Workhouses	716	63,303	62,127	125,430
Prisons	162	21,964	4,762	26,726
Lunatic Asylums	127	8,354	9,787	18,141
Hospitals	94	5,147	4,906	10,053
Asylums	507	24,814	17,275	42,089
SCOTLAND.				
Barracks	18	2,858	892	3,750
Workhouses.....	26	2,029	3,203	5,232
Prisons.....	92	2,541	1,573	4,114
Lunatic Asylums.....	22	1,399	1,464	2,863
Hospitals	24	746	848	1,594
Asylums	66	2,369	2,273	4,642
ISLANDS IN THE BRITISH SEAS.				
Barracks	4	1,146	470	1,616
Workhouses	4	454	466	920
Prisons	3	88	31	119

TABLE XX.

Births, Deaths, and the Excess of Births over Deaths, in England and Wales, for the Twelve Years from 1841 to 1852, inclusive.

Years.	Births.			Deaths.			Excess of Births over Deaths.
	Males.	Females.	Total.	Males.	Females.	Total.	
1841	262,714	249,444	512,158	174,198	169,649	343,847	168,311
1842	265,204	252,535	517,739	176,594	172,925	349,519	168,220
1843	270,577	256,748	527,325	175,721	170,724	346,445	180,880
1844	277,436	263,327	540,763	181,126	175,807	356,933	183,830
1845	278,418	265,103	543,521	177,529	171,837	349,366	194,155
1846	293,146	279,479	572,625	198,325	191,990	390,315	182,310
1847	275,658	264,307	539,965	214,375	208,929	423,304	116,661
1848	288,346	274,713	563,059	202,949	196,851	399,833	163,226
1849	295,158	283,001	578,159	221,801	219,052	440,853	137,306
1850	302,834	290,588	593,422	186,459	182,527	368,986	224,436
1851 .....	....	....	615,865	....	....	395,174	220,691
1852 .....	....	....	624,171	....	....	407,938	216,233

TABLE XXI.

Emigration from Great Britain and Ireland in each Year from 1843 to 1852, inclusive, and the destination of the Emigrants.

Years.	Destination of Emigrants.				
	British North America.	United States.	Australia and New Zealand.	All other Places.	Total.
1843	23,518	28,335	3,478	1,881	57,212
1844	22,924	43,660	2,229	1,873	70,686
1845	31,803	58,538	830	2,330	93,501
1846	43,139	82,239	2,347	1,826	129,551
1847	109,680	142,154	4,949	1,487	258,270
1848	31,065	188,233	23,904	4,887	248,089
1849	41,367	219,450	32,191	6,490	299,498
1850	32,961	223,078	16,037	8,773	280,849
1851	42,605	267,357	21,532	4,472	335,966
1852	32,876	244,261	87,881	3,749	368,764

It would appear by the foregoing table that the number of emigrants sailing from the United Kingdom in 1852 amounted, on an average, to upwards of a *thousand a day*.

The amount voted by Parliament for taking the census of the United Kingdom was £170,000.

Statistics Relative to Nova Scotia in 1851. By EDWARD CHESHIRE,
Assistant Secretary.

[Read before the Statistical Section of the British Association, at Hull,
14th September, 1853.]

PUBLIC attention having been directed to the North American fisheries of late, I have thought it might not be uninteresting to lay before this Section a short sketch of Nova Scotia, compiled chiefly from the writings of McCulloch, into which has been introduced some recent statistics relating to that province, extracted from a document received from the Colonial Office, entitled "Statistics of each County of the Province of Nova Scotia, exhibiting a view of the Population, Pursuits, Industry, and Resources of the country within each County of the Province; taken in 1851, by D. McCulloch, Esq., Secretary to the Board of Statistics."*

Nova Scotia was discovered by John Cabot in 1497. The French first settled in it, and called it Acadia; subsequently it fell under the English, having been granted by James I. to Sir W. Alexander in 1627, and was named Nova Scotia. In 1632 it was restored to France by the treaty of St. Germain's, but it subsequently several times changed masters, and was not finally established in the quiet possession of the British till 1758. At the peace of 1763 the boundaries of this colony were so defined as to include New Brunswick and Cape Breton, but in 1784 the former was made a separate government. Halifax is its capital, and the seat of government.

The colony consists of an oblong-shaped peninsula, between latitude 43° and 46° north, and longitude 61° and 67° west, connected with New Brunswick by a low sandy isthmus, only fourteen miles across, and separated from Cape Breton by the narrow strait called the Gut of Canso. It is about 300 miles in length, and of very various breadth. Area about 15,620 square miles, one-fifth portion of which consists of lakes, rivers, and salt-water inlets. The coast line is extremely irregular, forming numerous capes and bays. Rocks and islands fringe its shores, and the aspect of the entire Atlantic coast is extremely picturesque. Deep water is found, almost without exception, close to the rocks and islands; and the peninsula presents, towards the Bay of Fundy, bold and almost precipitous cliffs. The interior is intersected, in almost every direction, by streams, rivers, and lakes, but mostly of an inferior size. The peninsula has no elevation deserving the name of mountain, its highest point not rising more than 700 feet above the sea. The east end of the peninsula possesses a deep rich soil. The barren tracts are chiefly of sand or clay, and contain extensive coal-fields. Iron is abundantly interspersed among the coal strata, and varieties of lead and copper ore are met with, though in smaller quantities.

The climate of Nova Scotia, in respect to temperature, bears a general resemblance to that of Lower Canada, and is subject to the same great and sudden variations. The difference of temperature

* This document, being purely statistical, could not be read in its original state.

within twenty-four hours often exceeds 50°. These changes, however, are less frequent and extreme in the interior. The severe weather usually sets in about the middle of December. The snow storms are very heavy, some having been known to continue for sixty or seventy hours without intermission. The severity of the weather ends late in March, when chill, damp east and north-east winds succeed, caused by the breaking-up, and passage along the coast, of vast fields of ice, from the Gulf of St. Lawrence. Hence the most disagreeable season in this country is from the vernal equinox to the end of April. A warm summer occupies nearly three months, dating from the early part of June, and, for the most part, is remarkable for a continuance of calm and serene weather. Autumn, the most beautiful season of the year, may vie with that of any other country; and in November there are days which, for beauty, warmth, and mildness, are equal to the loveliest mornings of an English May. Westerly and north-west winds are most prevalent; and the fine days bear to the wet days a proportion of 8 to 5. The extreme variations of temperature common in this country have not that injurious influence on health which one might naturally expect. Rheumatic and inflammatory complaints are more prevalent than any other, and a considerable annual mortality occurs from pulmonary consumption. Intermittent fevers, however, so common in Canada and the United States, are here wholly unknown; typhus occurs only in a mitigated form; and the ravages of the yellow fever have never been felt. Nova Scotia may, therefore, on the whole, be considered a healthy country. Its inhabitants often live to extreme age, many attaining ninety and even one hundred years.

The subjoined table gives the census of the province in 1851, and exhibits the sex and age of the population:—

TABLE I.

Census of the Province of Nova Scotia in 1851.

Sex.	Age.						Total.
	Under 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	Above 50.	
Males	41,000	33,791	20,277	14,615	10,616	14,378	137,677
Females	43,452	33,414	22,385	14,665	10,271	14,223	138,410
Total...	87,452	67,235	42,662	29,280	20,887	28,601	276,117

The foregoing table indicates a remarkable equality between the sexes, except at the ages between 20 and 30, at which period the females preponderate over the males by rather more than 10 per cent. The great exertions of men at these ages to gain a livelihood, and to secure a settlement in life, added to the increased risk they incur by going out into the world, may possibly account for their diminished numbers at this period of life.

The following table shows the condition or state of the population:—

TABLE II.
Condition of the People.

Males.		Females.	
Married	39,351	Married	39,351
Widowers	2,238	Widows	5,916
Bachelors	52,088	Spinsters	49,721
Boys (under 10)	44,000	Girls (under 10)	43,452
Total	137,677	Total	138,440

The excess of widows over widowers, 3,678, or 160 per cent., probably arises in part from the risks incurred by the men, 10,000 in number, engaged in the fisheries.

Bachelors, it will be seen, exceed the spinsters by 2,367; consequently, spinsters are at a premium.

The births, deaths, and marriages, in 1851, were as follows: births, 8,120; deaths, 2,802; marriages, 1,710. The great preponderance of births over deaths, no less than 5,318, or 190 per cent., is a striking indication of the thriving condition of the colony.

The annexed table gives the profession, occupation, or calling of the inhabitants:—

TABLE III.
Occupation, Pursuit, or Calling of a large portion of the Inhabitants.

Clergymen	288	Farmers	31,604
Lawyers	143	Engaged in the fisheries.....	9,927
Doctors.....	145	Registered seamen	1,413
Merchants and traders	2,415	Employed at sea	3,961
Employed in manufactories....	3,200	Engaged in lumbering	1,254
Mechanics	8,895		

It would appear, by this table, that the spiritual wants of the colony are well provided for, there being one clergyman to every thousand of the population; but a lawyer and a doctor only to every *two* thousand persons. The farmers comprise one-ninth of the entire population.

The subjoined table exhibits the number of afflicted persons in the colony:—

TABLE IV.
Blind, Deaf and Dumb, Idiots, and Lunatics.

	Blind.	Deaf and Dumb.	Idiots.	Lunatics.	Total.
Males.....	74	132	176	76	458
Females	62	98	123	90	373
Total	136	230	299	166	831

There is little to remark upon in the above table, except that deafness and dumbness is 35 per cent. more prevalent among males than females, and idiocy 43 per cent.

The next table gives the number of Indians and Coloured persons in the province:—

TABLE V.
Indians and Coloured Persons.

	Indians.	Coloured Persons.	Total.
Males	524	2,321	2,845
Females	532	2,587	3,119
Total	1,056	4,908	5,964

Agriculture.—Nova Scotia is estimated to comprise somewhat more than 5,000,000 acres of land available for tillage; the proportion of land under cultivation at present being to the wilderness as 1 to 26. The first large public grants of land appear to have been made in 1760, and in less than thirteen years from that time nearly 8,000,000 acres were granted to individuals or companies in England, in lots ranging from 20,000 to 150,000 acres. These grants contained conditions of improvement, but the grantees, after having incurred some expense in endeavouring to settle their extensive properties, abandoned the land to its few inhabitants, or suffered it to remain absolutely waste. Efforts made to escheat these lands to the crown were repeatedly baffled by the influence of the absentee proprietors, and thus the province was, for a time, effectually closed against immigration either from England or the neighbouring colonies. Licensed occupiers, however, and squatters, have improved some portions of these tracts; and to them must be ascribed the progress made by the colony in population and agriculture. In regard to improved lands, the number of acres of dyked land, in 1851, was 40,012, and of other improved lands 799,310. The system of selling in lots, not exceeding 1,000 acres, was introduced in 1827; and the average price of unimproved land, in 1839, amounted to 2s. 3d. an acre. The quantity of land ungranted in Nova Scotia, in 1838, was estimated at about 2,500,000 acres, but of these not above one-eighth part was fit for tillage. The country, as respects the quantity of land and the state of agriculture, may be divided into three distinct sections: in the first division the soil is rich and productive; in the second it is extremely rocky, but good crops of wheat and grain are obtained in some places; and in the third the land is for the most part poor, and susceptible of little or no improvement. The crops usually cultivated are wheat, oats, and barley, with smaller quantities of peas, buckwheat, rye, &c. Potatoes are universally cultivated, and form the staple article of food throughout the province; turnips are also raised in large quantities.

The following table shows the annual yield of the respective crops:—

TABLE VI.
Crops, Grain, and otherwise.

Wheat	297,157 bushels	Peas and beans.....	21,638 bushels
Barley	196,097 „	Grass seeds	3,685 „
Rye	61,438 „	Potatoes	1,986,789 „
Oats	1,384,437 „	Turnips.....	467,127 „
Buck-wheat	170,301 „	Other roots	32,325 „
Indian corn	37,475 „	Hay	287,937 tons

Hired labour is difficult to procure, and too expensive to allow of its adoption, except by the more wealthy. Labourers are usually hired during the six months of summer, for which they receive from 15*l.* to 18*l.*, with board and lodging.

The products of the dairy are, butter 3,613,890 lbs.; and cheese, 652,069 lbs.

TABLE VII.
Live Stock.

Horses	28,789	Sheep	282,180
Neat cattle	156,857	Swine	51,533
Milch cows	86,856		

The forests of Nova Scotia abound with good timber: pine and birch, oak, beech, ash, and maple, are the most common trees; and many of the inhabitants have, for years, been supported by the timber trade. The exports of timber in 1837 were valued at 143,736*l.* The principal wild animals of the province are the moose-deer, cariboo, bear, loup-cervier, fox, martin, otter, mink, and squirrel, but the number of animals has, of late, greatly decreased. The rivers abound with varieties of fresh-water fish, besides which, cod, herrings, mackerel, haubert, and other kinds of sea-fish are found in the deep bays of the coast. The inhabitants share in the whale, seal, and cod fisheries; and this branch of industry has for some years been on the increase. The fish of all sorts, chiefly cod, exported in 1837, was valued at 181,960*l.*, besides which the exports of train-oil were estimated at 20,280*l.*

The subjoined table, relating to the fisheries, will be read with interest at the present time:—

TABLE VIII.
Fisheries in 1851.

Vessels employed	812	Quantity of fish oil.....	189,250*
Tonnage	43,333	Value of ditto in £.....	17,754
Men	3,681	Quantity of dry fish cured ...	196,434*
Boats employed.....	5,161	Salmon in barrels	1,669
Men	6,713	Shad	3,536
Quantity of smoked herrings	15,409*	Mackerel.....	100,047
Value of ditto in £	217,270	Herrings	53,200
Nets and seines.....	30,154	Alewives	5,343

* In the returns there is nothing to show what these numbers indicate.

An important branch of employment in Nova Scotia is mining. Coal and iron are abundant, as has been before stated. The total value of the coal produced in Nova Scotia, in 1839, amounted to 25,000*l*. Gypsum abounds in the west districts, and is highly prized in the United States as manure; the quantity exported thither from Nova Scotia, in 1837, amounted to 22,326 tons, valued at 6,738*l*.

The annexed table gives the present yield of the mines, &c.:—

TABLE IX.
Coals, Lime, Bricks, and Gypsum.

Coal raised, in chaldrons	114,992	Gypsum quarried, in tons	79,795
Baskets of lime burnt	28,693	Value of ditto in £.....	10,498
Value of ditto in £	4,433	Grindstones quarried, in tons....	37,540
Bricks made	2,845,100	Value of ditto in £.....	5,857
Value of ditto in £	3,211		

The two following tables relate to the manufactures of the colony, by which it will be seen that hand-looms are very numerous, and that grist and saw-mills and tanneries abound:—

TABLE X.
Manufactures.

Mills, Factories, &c.	Number.	Value in £.	Hands Employed.
Saw mills.....	1,153	89,869	1,786
Grist mills	398	72,649	437
Steam mills or factories	10	....	....
Tanneries	237	26,762	374
Foundries	9	12,900	138
Weaving and carding establish- ments	81	11,690	119
Hand looms	11,096	24,486	....
Breweries and distilleries	17	6,032	42
Other factories	131	14,382	185

Manufactories, continued.

Iron smelted	in tons	400	Agricultural implements, value	} 16,640
Value of ditto	in £	4,635	in £	
Value of castings	do.	3,486	Chairs and cabinet ware....	do. 11,155
Flannel	in yds.	219,352	Carriages.....	do. 9,491
Fulled cloth	do.	119,698	Other wooden ware.....	do. 19,233
Cloth not fulled	do.	790,101	Boots and shoes	do. 73,654
Malt liquor	in galls.	78,076	Leather	do. 52,625
Distilled liquor.....	do.	11,900	Soap	do. 28,277
Maple sugar	in lbs.	110,441	Candles	do. 21,210

The position of Nova Scotia gives it great commercial advantages; and its trade, especially with the United States, has been for some years steadily on the increase. The exports, chiefly to Canada, the United States, and Great Britain, consist of fish and fish-oil, timber, coals, &c.; the whole being valued, in 1837, at 478,461*l*. The im-

ports, during the same year, comprised corn and flour, British manufactures, colonial produce, &c., and were valued at 790,765*l*. The trade principally centres in Halifax, the capital.

Subjoined is a table showing the number of ships, and their tonnage, which entered and left the ports of Nova Scotia in 1839:—

TABLE XI.
Shipping.

Countries.	Entered Inwards.		Cleared Outwards.	
	Ships.	Tonnage.	Ships.	Tonnage.
Great Britain.....	97	27,886	102	29,739
British Colonies	2,517	149,631	2,815	179,712
United States	1,211	136,580	1,266	139,427
Foreign	181	18,039	49	5,299
Total	4,006	332,136	4,232	354,177

The number of vessels built in 1851 was 486, (tonnage 57,776,) and the number of boats 2,654. The means of internal communication have been much improved within the last few years, and a water communication has been effected between Halifax and Windsor; but the want of such communication is severely felt in the interior settlements.

The constitution of Nova Scotia is a representative provincial government. The Lieutenant-Governor, who is subordinate to the Governor-General of British North America, is commander within the province; and the supreme civil as well as military authority under him, is a council of twelve members, of whom the bishop and chief justice are members *ex officio*, and the rest appointed by the Crown. The legislative assembly consists of a body of forty-one members, elected by 40*s*. freeholders. It is elected, like the British House of Commons, for seven years, but may be prorogued or dissolved by the Lieutenant-Governor. It meets every year, and all money bills must originate in this assembly; other bills require the consent of the Governor and council before they become law. For the purposes of election, Nova Scotia is divided into ten counties. The counties have two members each, and the other representatives are returned by the towns. Justice is administered by a Court of Queen's Bench, sitting at Halifax, and by district courts in the different counties. The common and statute law of England are in force. The laws are, on the whole, considered judicious, and, as far as they go, calculated to promote the prosperity of the colony, but the harmony of society is too often broken by a love of litigation.

The revenue, amounting to upwards of 60,000*l*., is chiefly raised by duties of 2½ per cent. *ad valorem* on property generally. Taxation is extremely light; the cost of defence being defrayed by Great Britain, and the inhabitants being burdened only with the civil government and local improvements. The military force consists of three regiments of the line, the expense of whose maintenance in England is estimated at about 120,000*l*. a-year.

The Church of England is the established religion, and in 1838 the

colony was divided into thirty-two parishes, each of which had a rector salaried by the Crown, or by the Society for the Propagation of the Gospel. Nova Scotia was made a bishopric in 1787, the diocese extending over New Brunswick and Prince Edward's Island, Newfoundland, and the Bermudas.

The subjoined table exhibits the various religious denominations into which the inhabitants of the province were divided in 1851:—

TABLE XII.
Religious Denominations.

Church of England.....	36,482	Methodists	23,596
Roman Catholics	69,634	Congregationalists	2,639
Kirk of Scotland	18,867	Universalists	580
Presbyterian Church of Nova } Scotia	28,767	Lutherans	4,087
Free Church	25,280	Sandinianians	101
Baptists	42,243	Quakers	188
		Other Denominations.....	3,791

It will be observed that one-eighth only of the population follow the persuasion of the established Church of the colony; that one-fourth are Roman Catholics; the remaining five-eighths of the population being comprised of upwards of ten other religious denominations, to each of which a complete toleration is granted. The number of churches is 567, or about 1 to every 500 persons. It has before been shown that each clergyman has a charge of 1,000 persons, consequently each has to serve two churches. The number of schools is 1,096, and of scholars 31,354. The principal college devoted to education is Windsor College, which is partly supported by the provincial government and partly by subscription.

The annexed table gives the number of houses and buildings in the colony, distinguishing the inhabited from the uninhabited; also the number of families, &c.

TABLE XIII.
Houses, Buildings, &c.

Inhabited houses.....	41,455	Paupers	1,072
Families	45,541	Rate payers	38,388
Uninhabited houses	2,028	Probable value of real es- } tate in £	8,050,923
Houses building	2,347		
Stores, barns, and outhouses....	52,758		

The inhabited houses give one to every seven of the population: a number a little in excess of that which obtains in England and Wales, where there are only 5.5 persons to a house.

MISCELLANEA.

PROCEEDINGS OF THE STATISTICAL SOCIETY.

*Seventh Ordinary Meeting.**Monday, the 16th day of May, 1853.*

Sir John P Boileau, Bart., V.P., in the Chair.

The following gentlemen were elected Fellows of the Society:—

Edward Horsman, Esq.

|

James Meikle, Esq.

The following Paper was read:—

“On the Immediate and Remote Effect of the Remission of Customs and Excise Duties on the Productiveness of those Branches of the Revenue.” Communicated by Dr. Guy.

*Eighth Ordinary Meeting.**Monday, the 20th day of June, 1853.*

The Right Hon. Holt Mackenzie, V.P., in the Chair.

William Beverley, Esq., was elected a Fellow of the Society.

The following Paper was read:—

“On Freehold Land Societies.” By Thomas Beggs, F.S.S.

*First Ordinary Meeting.**Monday, the 21st day of November, 1853.*

The Rev. E. Wyatt-Edgell, V.P., in the Chair.

The following gentlemen were elected Fellows of the Society:—

Captain B. J. Bell.

|

E. J. Farren, Esq.

W. P. Clirehugh, Esq.

C. T. Lewis, Esq.

P. M. Dove, Esq.

The Hon. William Napier.

The following Paper was read:—

“Résumé of the Statistical Congress held at Brussels, September 11th, 1853, for the purpose of introducing unity in the Statistical Documents of all Countries.” By Leone Levi, Esq.

*Second Ordinary Meeting.**Monday, the 19th day of December, 1853.*

The Rev. E. Wyatt Edgell, V.P., in the Chair.

The following gentlemen were elected Fellows of the Society:—

G. P. Bidder, Esq.

|

C. L. Lawson, Esq.

David Chisholm, Esq.

John Lee, LL.D.

Arthur Gurney, Esq.

Alfred Waddilove, D.C.L.

The following Paper was read:—

“On the Duration of Life among Medical Men.” By W. A. Guy, M.B.

**THE MARRIAGES, BIRTHS, AND DEATHS,
REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.**

*The Marriages for the Quarter ended June, 1853, and the Births and
Deaths for the Quarter ended September, 1853,*

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

This return comprises the births and deaths registered by 2,191 registrars in all the districts of England during the Summer quarter ended September 30th, 1853; and the marriages in 12,039 churches or chapels, about 3,421 registered places of worship unconnected with the Established Church, and 625 superintendent registrars' offices, in the quarter that ended June 30th, 1853.

The return of marriages is not complete: but the defects are inconsiderable, and approximative numbers have been supplied from the records of previous years.

The marriages exceeded the average in the quarter ended in June. For the quarter that ended in September 30th the births have also been above the average number, while the deaths have been fewer than is usual in proportion to the population. The mortality of the town population has experienced a marked diminution during the summer; but one town has suffered severely, and others are threatened by Asiatic cholera.

MARRIAGES.—40,335 marriages were celebrated in the quarter that ended in June, 1853; a number exceeding by 328 the marriages in the corresponding quarter of the previous year. The marriages in the spring quarter have thus gradually risen from 30,018 in 1842 to 40,335 in 1853. The increase of marriages within the last five years is particularly conspicuous in London, Cornwall, Staffordshire, Cheshire, Monmouthshire, and South Wales.

*Marriages, Births, and Deaths, returned in the Years 1841-53 and in the Quarters
of those Years.*

YEARS.....	1841	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851*	1852	1853
Marriages	122496	118825	123818	132249	143743	145661	135845	138230	141883	152744	151206	158459	...
Births	512158	517739	527325	540763	543521	572625	539965	563059	578159	593422	615865	624171	...
Deaths	343847	349519	346445	356933	349366	390315	423301	399833	440839	368995	395171	407938	...
MARRIAGES.													
Quarters ended the last day of													
March	24447	25460	25285	26387	29551	31117	27480	28398	28429	30567	32724	32933	35014
June	32551	30048	31113	34268	35309	37111	35197	34721	35844	39204	38635	40007	40335
September	29397	27288	28847	31675	35003	35070	32139	32995	33874	37636	37316	38291	...
December	26101	35629	38573	39919	43889	42066	49729	42116	43736	45337	45531	47208	...
BIRTHS.													
March	133720	135615	136837	143578	143080	145108	146153	139736	153772	144551	157286	161776	161598
June	129881	134096	131279	136941	136853	149450	139072	149769	153693	155865	159073	159136	158718
September	128668	133296	128161	130078	132369	138718	127173	140559	135223	146911	150594	151198	147581
December	124686	124732	131018	130166	131219	139349	127267	133204	135471	146095	146912	152066	...
DEATHS.													
March	99064	96314	94926	101021	101664	89454	119672	120032	105870	98436	105306	106682	116241
June	86134	86558	87284	85337	89149	90231	106718	99727	102153	92371	99168	100813	107861
September	75440	82339	76792	79708	74872	101663	93435	87638	135227	85840	91381	100497	92332
December	53204	84328	87193	90864	89681	108937	103479	92456	97589	91845	99019	99916	...

* The numbers up to 1851 have appeared in the Annual Reports.

BIRTHS.—147,581 births were registered in the quarter ended September 30th. This is above the average number, but it is less by 3,612 than the numbers (151,193) which were registered in the corresponding quarter of 1852. The decrease is, singularly enough, observable in every county except Middlesex, Surrey, Cornwall, Staffordshire, Rutlandshire, Cheshire, Lancashire, Cumberland, and Monmouthshire.

INCREASE OF POPULATION.—As 147,581 births and only 92,332 deaths were registered, a balance of 55,249 remains in the population. The births and deaths are not registered in Scotland and Ireland, as they are in nearly all other civilized countries, so that the increase of the population of the United Kingdom cannot be ascertained; but if the excess of births in those divisions of the United Kingdom bears the same proportion to the population as it does in England and Wales, the increase by natural causes must be about 83,000. But 87,467 emigrants sailed from the ports of the United Kingdom, at which there are Government Emigration Agents, in the quarter ended September 30th, 1853; so that allowing on one hand for births unregistered, on the other for emigrants unreturned, it is probable that the population of the United Kingdom has declined rather than increased during the summer. 13,623 of the emigrants sailed from London, Plymouth, and Southampton; 63,600 from Liverpool; 2,807 from Glasgow and Greenock; 7,437 from Irish ports.* As a large proportion of the emigrants from Liverpool, as well as from the Irish ports,

England†:—Annual Rate, per cent., of Marriage, Birth, and Death, during the Years 1843-53, and the Quarters of those Years.

Estimated Population of England in thousands in the middle of each Year.....	16318	16516	16716	16919	17124	17331	17541	17754	17977	18195	...	18195
YEARS	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	Mean, 1843-52	1853
Marriages.....	·759	·801	·860	·861	·793	·798	·809	·860	·858	·851	·828	...
Births.....	3·232	3·274	3·251	3·385	3·153	3·249	3·296	3·343	3·426	3·472	3·308	...
Deaths.....	2·123	2·161	2·090	2·307	2·472	2·307	2·513	2·078	2·198	2·269	2·252	...
MARRIAGES.												
Quarters ended the last day of												
March.....	·632	·644	·721	·757	·655	·661	·661	·702	·742	·730	·691	·776
June.....	·767	·834	·849	·882	·826	·805	·822	·858	·864	·883	·842	·891
September.....	·701	·760	·830	·822	·751	·755	·766	·840	·823	·834	·788	...
December.....	·934	·955	1·038	·983	·940	·961	·986	1·010	1·001	1·038	·985	...
BIRTHS.												
March.....	3·420	3·507	3·491	3·498	3·458	3·252	3·575	3·321	3·567	3·555	3·470	3·551
June.....	3·234	3·334	3·291	3·551	3·205	3·474	3·523	3·530	3·557	3·516	3·428	3·507
September.....	3·114	3·123	3·140	3·251	2·945	3·211	3·056	3·281	3·321	3·294	3·174	3·215
December.....	3·174	3·115	3·103	3·256	2·938	3·038	3·053	3·253	3·274	3·343	3·155	...
DEATHS.												
March.....	2·373	2·467	2·554	2·157	2·850	2·794	2·462	2·261	2·388	2·364	2·467	2·620
June.....	2·149	2·077	2·144	2·144	2·506	2·313	2·341	2·107	2·224	2·227	2·223	2·883
September.....	1·866	1·913	1·776	2·382	2·163	2·005	3·057	1·917	2·017	2·190	2·129	2·012
December.....	2·119	2·175	1·908	2·545	2·389	2·108	2·199	2·045	2·177	2·196	2·156	...

† The table may be read thus, without reference to the decimal points:—In the year 1843, to 100,000 of the population of England there were 758 marriages, 3,249 births, and 2,307 deaths registered. The annual rates of marriage in each of the four quarters were '661, '805, '755, and '961 per cent.; the rates of death 2·794, 2·313, 2·005, and 2·108 per cent. In reading the population on the first line add three ciphers (000). The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the two last quarters of the year 92 days. For this inequality a correction has been made in the calculation.

* Return with which the Registrar-General has been favoured by the Emigration Commissioners.

are natives of Ireland, it follows that the population of Ireland is decreasing, and that the population of England is slowly increasing, while the contributions of both countries within the last three years to the colonial plantations are without example.

PRICES OF PROVISIONS.—It will be seen in the annexed table that the prices of the chief articles of food are much higher than they were in the corresponding quarter of the last year; the rise in the price of wheat is 26, mutton 23, beef 24, potatoes 31 per cent.

The rate of wages has been raised in several trades, and, at the same time, the labourers and artisans have been more fully employed.

The Average Prices of Consols, of Wheat, Meat, and Potatoes, also the Average Quantity of Wheat sold and imported Weekly, in each of the nine Quarters ended September 30th, 1853.

Quarters ended	Average Price of Consols (for Money.)	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Lendenhall and Newgate Markets (by the Carcase).		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.
			Average Number of Quarters weekly.		Beef.	Mutton.	
1851							
Sept. 30.	96½	40s. 7d.	74,714	91,040	3d.—5d. Mean 4d.	3¾d.—5¾d. Mean 4¾d.	90s.—110s. Mean 100s.
Dec. 31.	97½	36s. 7d.	109,506	47,986	3d.—5d. Mean 4d.	3¾d.—5¾d. Mean 4¾d.	65s.—75s. Mean 70s.
1852							
Mar. 31.	97½	40s. 10d.	95,532	27,540	3¾d.—5d. Mean 4½d.	3¾d.—5¾d. Mean 4¾d.	60s.—80s. Mean 70s.
June 30.	99½	40s. 10d.	87,949	51,675	3¾d.—4¾d. Mean 4d.	3¾d.—5½d. Mean 4½d.	85s.—110s. Mean 97s. 6d.
Sept. 30.	100	41s. 2d.	78,712	67,912	3¾d.—5d. Mean 4½d.	4d.—6d. Mean 5d.	80s.—100s. Mean 90s.
Dec. 31.	100½	40s. 5d.	111,224	72,870	3d.—5d. Mean 4d.	4½d.—6½d. Mean 5½d.	90s.—120s. Mean 105s.
1853							
Mar. 31.	99½	45s. 7d.	95,115	63,530	3¾d.—5½d. Mean 4½d.	4¾d.—6¾d. Mean 5¾d.	110s.—145s. Mean 127s. 6d.
June 30.	100½	44s. 6d.	84,559	82,623	4d.—5¾d. Mean 4¾d.	5d.—6¾d. Mean 5¾d.	110s.—145s. Mean 127s. 6d.
Sept. 30.	97	51s. 10d.	86,087	120,020	4½d.—6d. Mean 5½d.	5d.—7½d. Mean 6½d.	110s.—125s. Mean 117s. 6d.

Note.—The total number of quarters of wheat sold in England and Wales for the 13 weeks ended September 30th, 1851, was 971,276; for the 13 weeks ended December 31st, 1,423,582; for the 13 weeks ended March 31st, 1852, 1,241,921; for the 13 weeks ended June 30th, 1,113,339; for the 13 weeks ended September 30th, 1,023,251; for the 13 weeks ended December 31st, 1,445,906; for the 13 weeks ended March 31st, 1853, 1,236,493; for the 13 weeks ended June 30th, 1853, 1,099,261; for the 13 weeks ended Sept. 30th, 1853, 1,119,128. The total number of quarters entered for Home Consumption was, respectively, 1,183,523; 671,803; 358,024; 710,780; 882,850; 947,310; 825,886; 1,074,095; and 1,560,255; the second total, however, embraces the returns of 14 weeks.

The low temperature, the excess of rain, the cloudy sky, and the other meteorological phenomena of the quarter are ably described by Mr. Glaisher.

STATE OF THE PUBLIC HEALTH.—92,332 deaths have been registered during the quarter, a number less by 8,165 than the number of persons (100,497) whose deaths were recorded in the summer quarter of 1852. The depression of the mortality extended over nearly every county except Durham and Northumberland, and, indeed, over all except a few districts of those counties.

A similar depression of the mortality was observed in the summer quarter of 1848, immediately before the outbreak of the epidemic cholera.

The mortality during the quarter, of the districts comprising the chief towns and a population of 7,795,882, was at the rate of 2·4 per cent. per annum nearly; the mortality of the districts of small towns and country parishes was at the rate of 1·7 per cent. The average rates are higher, or 2·6 and 1·9 per cent.

The number of deaths in London was 12,918, which is below the average. The deaths by zymotic disease were 3,456, including 1,232 by diarrhoea and 137 by cholera. The deaths by diarrhoea were 200 less than in either of the summer quarters of the preceding years; and the deaths from cholera did not exceed the average of the three preceding summer quarters. 585 deaths were referred to typhus; and over the country scarlatina prevailed with great severity in several districts. The local epidemics are indicated in the Registrar's reports.

The appearance of the Asiatic cholera in London, and the terrific mortality which it has occasioned within a few weeks in the North of England, are of such importance as to demand the whole of our attention.

As a means of guidance and a basis of reasoning it may be useful to present here a brief summary of the facts which regulated the course of the epidemic that broke out five years ago.

Deaths in the Spring Quarters.

	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	Total 1843-52	1853
In 117 Districts, comprising the chief towns	36953	38933	36139	51405	49479	43445	78159	42777	46061	51635	474986	47645
In 508 Districts, comprising chiefly small towns and country parishes	39839	40775	38733	50258	43956	44317	57205	43267	45539	48862	452751	44675
Total.....	76792	79708	74872	101663	93435	87762	135364	86044	91600	100497	927737	92320

Population, Deaths, and Mortality per cent. in the Summer Quarters, 1843-53.

	Population Enumerated.		Deaths in 10 Summer Quarters, 1843-52.	Annual Rate of Mortality of 10 Summer Quarters, 1843-52.	Annual Rate of Mortality in the Summer Quarter 1853.
	June 6-7th, 1841.	March 31st, 1851.			
In 117 Districts, com- prising the chief towns	6,612,958	7,795,882	474,986	2·603	2·390
In 508 Districts, com- prising chiefly small towns and country parishes	9,301,190	10,126,886	452,751	1·850	1·744
All England	15,914,148	17,922,768	927,737	2·128	2·012

MORTALITY OF THE METROPOLIS.

A Table of the Deaths in London from all Causes, Registered in the September Quarters of the Four Years, 1850-53.

CAUSES OF DEATH.	Quarters ended Sept.,				CAUSES OF DEATH.	Quarters ended Sept.,			
	1850	1851	1852	1853		1850	1851	1852	1853
ALL CAUSES	11,578	12,887	13,111	12,918	III. Scrofula	80	95	100	121
SPECIFIED CAUSES	11,520	12,837	13,007	12,773	Tuberc Mesenterica	238	251	279	273
I. Zymotic Diseases	3,011	3,861	3,723	3,456	Phthisis or Consumption	1,508	1,083	1,072	1,745
<i>Sporadic Diseases:</i>					Hydrocephalus	357	348	400	353
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	574	571	555	575	IV. Cerebral Diseases	131	132	130	127
III. Tubercular Diseases	2,183	2,377	2,463	2,405	Apoplexy	281	293	283	281
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,372	1,394	1,423	1,373	Paralysis	245	230	234	244
V. Diseases of the Heart and Blood Vessels	424	418	404	405	Delirium Tremens	55	35	28	37
VI. Diseases of the Lungs and of the other Organs of Respiration	1,032	1,103	1,148	1,240	Cholera	1	2	2	3
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	748	803	840	815	Epilepsy	08	77	75	08
VIII. Diseases of the Kidneys, &c.	106	131	124	197	Tetanus	4	1	3	3
IX. Childbirth, Diseases of the Uterus, &c.	110	110	108	113	Insanity	20	33	27	25
X. Rheumatism, Diseases of the Bones, Joints, &c.	100	94	119	80	Convulsions	422	444	504	403
XI. Diseases of the Skin, Cellular Tissue, &c.	16	20	26	20	Disease of Brain, &c.	145	138	137	122
XII. Malformations	43	37	48	40	V. Pericarditis	25	27	20	15
XIII. Premature Birth and Debility	370	406	415	306	Aneurism	20	21	14	23
XIV. Atrophy	361	416	408	483	Disease of Heart, &c.	379	370	430	427
XV. Age	439	502	510	420	VI. Laryngitis	43	28	31	30
XVI. Sudden*	115	85	71	70	Bronchitis	380	409	382	523
XVII. Violence, Privation, Cold, and Intemperance	450	417	550	508	Pleurisy	31	33	51	51
					Pneumonia	430	407	514	515
					Asthma	83	65	71	72
					Disease of Lungs, &c.	03	80	80	60
					VII. Teething	121	132	133	128
					Quinsy	15	14	17	9
					Gastritis	32	34	22	24
					Enteritis	100	114	131	89
					Peritonitis	57	41	47	55
					Ascites	35	35	35	32
					Ulceration of Intestines, &c.	28	32	33	33
					Hernia	21	33	23	31
					Ileus	33	33	39	40
					Intussusception	8	12	11	12
					Stricture (of the Urinary Canal)	13	10	9	10
					Disease of Stomach, &c.	53	82	60	71
					Disease of Pancreas	1	...	1	...
					Hepatitis	47	40	60	50
					Jaundice	52	41	50	47
					Disease of Liver	125	139	164	189
					Disease of Spleen	10	2	2	4
					VIII. Nephritis	10	7	6	5
					Nephria (or Bright's Disease)	33	25	25	46
					Ischuria	3	1	2	2
					Diabetes	0	10	8	16
					Cystitis	0	0	0	13
					Stricture of Urethra	10	11	13	18
					Disease of Kidneys, &c.	81	66	50	83
					IX. Parameia	2	1	0	1
					Ovarian Dropsy	20	15	14	10
					Childbirth, see Metria	57	55	55	67
					Disease of Uterus, &c.	37	43	33	35
					X. Arthritis	1	2	...	...
					Rheumatism	53	46	74	33
					Disease of Joints, &c.	46	46	45	45
					XI. Carbuncle	9	4	15	17
					Erysipelas	3	6	2	3
					Disease of Skin, &c.	1	10	0	6
					XVII. Intemperance	10	13	21	21
					Privation	2	3	1	3
					Want of Breast Milk	57	67	101	90
					see Privation and Atrophy	1	...	...	4
					Neglect	26	10	23	15
					Poison	26	35	34	38
					Burns and Scalds	53	43	65	48
					Hanging, &c.	94	89	114	93
					Drowning	137	156	162	141
					Fractures and Contusions	19	21	20	20
					Wounds	19	9	13	20
					Other Violence	53	50	104	145
					Causes not specified .....	...	...	...	...

NOTE.—The 13 weeks of 1853, constituting the September quarter in the Weekly Tables of Mortality, ended September 24th, in which 12,918 deaths were registered. In the quarter ended September 30th 13,155 deaths were registered.

* Under the head of *sudden deaths* are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the coroner in vague terms, such as "found dead," "natural causes," &c., &c.

Meteorological Table, Quarter ended September 30th, 1853.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	WIND.		Mean Amount of Cloud.	RAIN.		Mean Degree of Humidity.
								Mean estimated Strength.	General Direction.		Number of Days on which it fell.	Amount collected.	
	in.	°	°	°	°	°	°	°				in.	
Jersey.....	29.551	60.3	79.0	46.0	17.5	29.0	33.0	1.9	N.W., W., & S.W.	4.4	38	7.6	0.866
Falmouth.....	....	59.1	78.0	42.0	16.4	31.0	36.0	1.7	W. & W.S.W.	6.6	50	10.0	....
Truro.....	....	58.3	77.0	41.0	14.8	31.3	36.0	1.2	N. & W.S.W.	6.7	44	8.7	0.849
Torquay.....	....	58.3	75.0	45.0	11.0	23.3	30.0	2.2	S.W.	....	....	6.5	0.808
Newport.....	29.582	58.2	80.0	40.2	16.7	32.4	39.8	3.0	S.W., W., & N.E.	6.6	40	7.4	0.831
Worthing.....	29.551	57.8	73.8	41.2	9.5	23.9	32.6	1.4	S.W. & N.E.	5.2	44	7.6	0.844
Southampton.....	....	58.6	78.0	43.3	....	23.7	34.7	0.5	....	7.3	28	6.1	0.827
Clifton.....	29.569	56.6	76.5	39.4	14.9	29.2	37.1	1.2	W., S.W., & N.E.	6.3	49	12.6	0.856
Royal Observatory.....	29.568	58.5	81.7	37.5	18.1	33.5	41.2	....	S.W.	7.5	42	10.6	0.796
Radcliffe Observatory.....	29.536	57.8	79.0	39.0	16.4	31.7	40.0	1.8	W.S.W. & N.E.	7.4	49	8.2	0.879
Aylesbury.....	....	59.4	81.0	34.5	21.2	39.7	49.5	0.4	S.W.	7.1	44	8.8	0.827
Royston.....	29.549	58.2	78.9	41.1	16.7	32.5	37.8	....	W., S.W., & N.E.	7.0	44	6.5	0.826
Bedford.....	29.522	58.5	82.3	38.0	17.5	34.1	41.3	2.0	S.W.	5.7	40	6.1	0.809
Norwich.....	....	58.1	81.0	39.0	15.6	33.0	42.0	....	....	....	39	9.1	....
Derby.....	29.627	56.4	75.0	35.0	17.2	32.7	40.0	....	S.W., W., & N.E.	....	42	8.0	0.807
Holkham.....	....	57.4	77.4	36.7	14.7	31.4	40.7	1.2	S.W.	5.9	44	8.6	0.872
Nottingham.....	....	55.7	79.0	33.5	17.7	37.7	45.5	0.4	N.W. & S.W.	7.6	38	9.3	0.772
Gainsborough.....	....	57.0	77.0	33.0	16.5	30.0	37.0	0.3	S.W.	5.6	43	7.0	0.811
Warrington.....	29.532	56.0	76.4	37.8	16.0	32.7	38.6	1.1	S.W., W., & N.W.	6.1	59	10.0	0.844
Liverpool.....	29.521	57.9	70.5	49.8	9.0	18.6	20.7	1.0	N.W. & S.W.	7.8	36	10.1	0.850
York.....	29.469	55.4	73.0	37.0	13.5	28.7	36.0	....	Var.	....	38	5.9	0.905
Durham.....	....	54.6	66.4	38.4	6.1	21.8	28.0	2.2	W. & S.W.	7.3	40	6.9	0.855
Newcastle.....	29.507	56.7	....	40.0	....	....	....	....	N.W., S.W., & S.E.	....	31	9.6	0.759
Dunino.....	29.476	55.3	72.0	37.0	14.2	27.3	35.0	2.1	S.W. & W.S.W.	4.5	35	8.9	0.787
Arbroath.....	29.489	51.6	73.0	36.0	18.0	31.7	39.0	1.1	Var.	6.9	40	7.0	0.748

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ended 5th January, 1853 and 1854; showing the Increase or Decrease thereof.—(Continued from page 371, vol. xvi.)

[Compiled from the "London Gazette."]

Sources of Revenue.	Years ended 5th January.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,695,382	18,978,223	282,841	....
Excise	13,356,981	13,629,103	272,122	....
Stamps	6,287,261	6,500,988	213,727	....
Taxes.....	3,377,843	3,153,868	....	223,975
Property Tax	5,509,637	5,560,196	50,559	....
Post Office.....	1,022,000	1,104,000	82,000	....
Crown Lands.....	260,000	402,888	142,888	....
Miscellaneous	293,729	176,375	....	117,354
Total Ordinary Revenue	48,802,833	49,505,641	1,044,137	341,329
Imprest and other Moneys.	634,063	879,089	245,026	....
Repayments of Advances....	1,031,297	1,399,388	368,091	....
Total Income.....	50,468,193	51,781,118	1,657,254	341,329
Deduct Decrease			341,329	
Increase on the Year			1,315,925	

Sources of Revenue.	Quarters ended 5th January.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs	4,541,384	4,444,578	....	96,806
Excise	3,539,646	3,425,676	....	113,970
Stamps	1,615,029	1,539,928	....	75,101
Taxes.....	1,419,873	1,402,690	....	17,183
Property Tax	468,238	414,888	....	53,530
Post Office.....	272,000	335,000	63,000	....
Crown Lands	80,000	80,000	....	....
Miscellaneous	32,008	26,121	....	5,887
Total Ordinary Revenue	11,968,178	11,668,881	63,000	362,297
Imprest and other Moneys.	142,938	279,477	136,539	....
Repayments of Advances....	491,995	361,702	....	130,293
Total Income	12,603,111	12,310,060	199,539	492,590
Deduct Increase			199,539	
Decrease on the Quarter				293,051

Consolidated Fund Operations.—The total income brought to this account in the quarter ended 5th January, 1854, was 13,825,468*l.* The total charge upon it was nil, consequently the surplus was 13,825,468*l.*

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Fourth Quarter of 1853; together with the Monthly, Quarterly, and Yearly Average—(Continued from p. 372, vol. xvi.)

[Supplied by the Controller of Corn Returns, H. F. JADIS, Esq.]

Weeks ended on a Saturday, 1853.		Weekly Average.					
		Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
October	1	59 5	37 0	22 2	36 11	42 10	42 11
"	8	64 0	33 7	22 9	39 1	44 3	44 4
"	15	68 4	40 1	23 10	39 11	45 8	45 1
"	22	68 11	40 7	24 2	38 4	45 7	50 7
"	29	69 1	40 9	24 8	40 10	48 4	51 10
Average for October.....		65 11	39 4	23 6	39 0	45 4	47 0
Nov.	5	71 9	41 3	25 5	43 0	48 10	53 3
"	12	73 7	42 2	25 5	42 7	49 9	56 7
"	19	72 7	42 3	26 0	43 11	52 6	56 7
"	26	72 0	41 9	26 0	43 7	50 11	54 9
Average for November....		72 5	41 10	25 8	43 3	50 6	55 3
Dec.	3	72 7	40 9	26 3	43 5	52 0	53 5
"	10	71 11	39 9	25 4	43 3	50 6	51 5
"	17	70 9	38 9	24 11	44 7	48 10	51 10
"	24	70 0	37 11	25 0	44 4	46 10	49 6
"	31	73 0	39 4	25 6	47 5	46 0	50 3
Average for December....		71 7	39 3	25 4	40 7	48 10	51 3
Average for the Quarter ..		69 10	40 0	24 9	42 2	48 0	50 10
Average for the Year		53 3	33 2	21 0	35 0	40 1	38 6

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ended 10th October, 5th November, and 5th December, 1853; the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouses at the close thereof.—(Continued from p. 372, vol. xvi.)

[Compiled from the "London Gazette."]

WHEAT.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1853.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
10th Oct.	151,704	16,764	168,468	452,124	16,764	468,888	168	1	169
5th Nov.	413,117	12,719	425,866	413,117	12,719	425,866	168	1	169
5th Dec.	392,789	18,340	411,129	392,789	18,340	411,129	168	1	169

WHEAT-FLOUR.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1853.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
10th Oct.	396,779	66,767	463,546	396,779	66,767	463,546	6	..	6
5th Nov.	284,523	17,832	302,355	284,523	17,832	302,355	6	..	6
5th Dec.	270,159	24,054	294,213	270,159	24,054	294,213	6	..	6

Fluctuations in the Stock and Share Market during the Months of July, August, and September, 1853.—(Continued from p. 285, vol. xvi.)

Stocks and Shares.	Amount of Share.			Amount Paid.			Price on the			Highest Price during the Months of			Lowest Price during the Months of		
	July.	Aug.	September.	July.	August.	September.	1st July.	1st Aug.	1st Sept.	July.	Aug.	Sept.	July.	Aug.	Sept.
Consols .....	...	...	...	...	...	...	98 $\frac{1}{2}$ 3s. 6d. Pm.	98 $\frac{1}{2}$ 1s. 6d. Pm.	97 $\frac{1}{2}$ 1s. 6d. Pm.	98 $\frac{1}{2}$ 3s. Pm.	97 $\frac{1}{2}$ 1s. Pm.	97 $\frac{1}{2}$ 4s. dis.	97 $\frac{1}{2}$ 4s. dis.	90 $\frac{1}{2}$ 16s. dis.	
Exchequer Bills .....	...	...	...	...	...	...	104	103 $\frac{1}{2}$	101	105 $\frac{1}{2}$	104	101 $\frac{1}{2}$	103	101	92
RAILWAYS—															
Brighton	Stock	Stock	Stock	100	100	100	67 $\frac{1}{2}$	67 $\frac{1}{2}$	61 $\frac{1}{2}$	68 $\frac{1}{2}$	66 $\frac{1}{2}$	66 $\frac{1}{2}$	66 $\frac{1}{2}$	66 $\frac{1}{2}$	45 $\frac{1}{2}$
Calcuttan	Stock	Stock	Stock	100	100	100	13	13	13	13 $\frac{1}{2}$	13 $\frac{1}{2}$	13 $\frac{1}{2}$	12 $\frac{1}{2}$	13 $\frac{1}{2}$	11 $\frac{1}{2}$
Eastern Counties	Stock	Stock	Stock	100	100	100	86	84	81	88 $\frac{1}{2}$	84 $\frac{1}{2}$	82	84 $\frac{1}{2}$	81 $\frac{1}{2}$	68 $\frac{1}{2}$
Great Northern	Stock	Stock	Stock	100	100	100	89	85 $\frac{1}{2}$	86	91 $\frac{1}{2}$	89 $\frac{1}{2}$	86 $\frac{1}{2}$	87 $\frac{1}{2}$	84 $\frac{1}{2}$	77 $\frac{1}{2}$
London and North-Western	Stock	Stock	Stock	100	100	100	114 $\frac{1}{2}$	113 $\frac{1}{2}$	109 $\frac{1}{2}$	117	114	110 $\frac{1}{2}$	113 $\frac{1}{2}$	110	98 $\frac{1}{2}$
Midland	Stock	Stock	Stock	100	100	100	71 $\frac{1}{2}$	70 $\frac{1}{2}$	68 $\frac{1}{2}$	72 $\frac{1}{2}$	70 $\frac{1}{2}$	68 $\frac{1}{2}$	69 $\frac{1}{2}$	68 $\frac{1}{2}$	54
Manchester and Yorkshire	Stock	Stock	Stock	100	100	100	77 $\frac{1}{2}$	78	73	79	75 $\frac{1}{2}$	73 $\frac{1}{2}$	76	73 $\frac{1}{2}$	60
North Staffordshire	20	20	20	17 $\frac{1}{2}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$	12 $\frac{1}{2}$	13 $\frac{1}{2}$	12 $\frac{1}{2}$	13 $\frac{1}{2}$	13 $\frac{1}{2}$	12 $\frac{1}{2}$	12 $\frac{1}{2}$	12 $\frac{1}{2}$	10 $\frac{1}{2}$
South-Eastern	Stock	Stock	Stock	100	100	100	70	73	68	74 $\frac{1}{2}$	72 $\frac{1}{2}$	68 $\frac{1}{2}$	69 $\frac{1}{2}$	68 $\frac{1}{2}$	55 $\frac{1}{2}$
South-Western	Stock	Stock	Stock	100	100	100	85 $\frac{1}{2}$	84	80 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$	84 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$	73
York, Newcastle, & Berwick	Stock	Stock	Stock	100	100	100	69	69 $\frac{1}{2}$	65 $\frac{1}{2}$	70 $\frac{1}{2}$	70	69	68 $\frac{1}{2}$	68 $\frac{1}{2}$	56
York and North Midland	Stock	Stock	Stock	100	100	100	59 $\frac{1}{2}$	60 $\frac{1}{2}$	57	61	60 $\frac{1}{2}$	57 $\frac{1}{2}$	57 $\frac{1}{2}$	58	41
Northern of France	20	20	20	16	16	16	35 $\frac{1}{2}$	35	34 $\frac{1}{2}$	35 $\frac{1}{2}$	36 $\frac{1}{2}$	35 $\frac{1}{2}$	33 $\frac{1}{2}$	34	32 $\frac{1}{2}$
East Indian	20	20	20	20	20	20	25 $\frac{1}{2}$	25 $\frac{1}{2}$	23 $\frac{1}{2}$	25 $\frac{1}{2}$	25 $\frac{1}{2}$	25	25	24 $\frac{1}{2}$	23 $\frac{1}{2}$

Average Price of Meat as sold in Smithfield Market in the Months of July, August, and September, 1853.—(Continued from p. 285, vol. xvi.)

[Supplied by the Board of Trade.]

Description.	July.	Aug.	Sept.	Description.	July.	Aug.	Sept.
Inferior Pests	s. d. 2 8	s. d. 2 6	s. d. 2 8	Inferior Sheep	s. d. 3 8	s. d. 3 8	s. d. 3 8
2nd class	s. d. 3 6	s. d. 3 6	s. d. 3 4	2nd class	s. d. 4 6	s. d. 4 2	s. d. 4 2
3rd class	s. d. 4 0	s. d. 4 4	s. d. 4 4	3rd do. (long coarse woolled)	s. d. 5 2	s. d. 4 8	s. d. 5 0
4th class (Scots)	s. d. 4 4	s. d. 4 8	s. d. 4 4	4th do. (South Down)	s. d. 5 0	s. d. 5 0	s. d. 5 0
				Lambis	s. d. 5 8	s. d. 5 0	s. d. 5 0
				Coarse Calves	s. d. 3 10	s. d. 3 6	s. d. 3 9
				Small Prime Calves	s. d. 5 0	s. d. 4 8	s. d. 4 11
				Large Hogs	s. d. 3 8	s. d. 3 2	s. d. 3 8
				Small Neat Porkers	s. d. 4 8	s. d. 4 4	s. d. 4 10

N.B.—Price of Meat at the rate of 8 lbs. Avordupois to the stone, sinking the offal.

Fluctuations in the Stock and Share Market during the Months of October, November, and December, 1853.

Stocks and Shares.	Amount of Share.;			Amount Paid.			Price on the			Highest Price during the Months of			Lowest Price during the Months of		
	October.	November.	December.	October.	November.	December.	1st Oct.	2nd Nov.	1st Dec.	Oct.	Nov.	Dec.	Oct.	Nov.	Dec.
Consols .....	...	...	...	...	...	...	93 ¹ / ₁₆ Dis.	94 Par to 4s. Pm.	92 ¹ / ₈ 4s. 6d. Pm.	91 ¹ / ₈ 9s. Pm.	96 9s. Pm.	95 ¹ / ₂ 9s. Pm.	90 ¹ / ₂ 13s. Dis.	92 ¹ / ₈ 2s. Pm.	92 ¹ / ₈ 2s. Pm.
Exchequer Bills .....	...	...	...	...	...	...	10s. 6d.	96 5s. 11 ¹ / ₂	97 ¹ / ₈ 5s. 11 ¹ / ₂	96 ¹ / ₈ 5s. 11 ¹ / ₂	98 ¹ / ₈ 5s. 11 ¹ / ₂	101 5s. 11 ¹ / ₂	92 5s. 11 ¹ / ₂	91 ¹ / ₈ 5s. 11 ¹ / ₂	97 5s. 11 ¹ / ₂
RAILWAYS—															
Brighton.....	Stock	Stock	Stock	100	100	100	94	96	97 ¹ / ₈	96 ¹ / ₈	98 ¹ / ₈	101	92	91 ¹ / ₈	97
Caledonian.....	Stock	Stock	Stock	100	100	100	50 ¹ / ₂	51 ¹ / ₂	55 ¹ / ₂	53	58 ¹ / ₂	58	47	51 ¹ / ₂	54 ¹ / ₂
Eastern Counties	Stock	Stock	Stock	20	20	20	11 ¹ / ₂	12 ¹ / ₂	13	12 ¹ / ₂	13 ¹ / ₂	13 ¹ / ₂	11 ¹ / ₂	12 ¹ / ₂	13
Great Northern.....	Stock	Stock	Stock	100	100	100	74 ¹ / ₂	74 ¹ / ₂	80	85	89 ¹ / ₂	87 ¹ / ₂	71 ¹ / ₂	79 ¹ / ₂	83 ¹ / ₂
Great Western.....	Stock	Stock	Stock	100	100	100	80 ¹ / ₂	80 ¹ / ₂	82 ¹ / ₂	83 ¹ / ₂	84 ¹ / ₂	85	78 ¹ / ₂	80	82 ¹ / ₂
London and North-Western	Stock	Stock	Stock	100	100	100	103 ¹ / ₂	102 ¹ / ₂	102	104	104 ¹ / ₂	105	101	101 ¹ / ₂	101 ¹ / ₂
Midland	Stock	Stock	Stock	100	100	100	59 ¹ / ₂	60 ¹ / ₂	62 ¹ / ₂	61 ¹ / ₂	61 ¹ / ₂	62	60	59	62 ¹ / ₂
Lancashire and Yorkshire.....	Stock	Stock	Stock	100	100	100	63 ¹ / ₂	63 ¹ / ₂	65 ¹ / ₂	64 ¹ / ₂	64 ¹ / ₂	65	57 ¹ / ₂	59	62 ¹ / ₂
North Staffordshire.....	20	20	20	17 ¹ / ₂	17 ¹ / ₂	100	11 ¹ / ₂	11 ¹ / ₂	11 ¹ / ₂	11 ¹ / ₂	12 ¹ / ₂	12 ¹ / ₂	11	11 ¹ / ₂	11 ¹ / ₂
South-Eastern	Stock	Stock	Stock	100	100	100	60	60	61 ¹ / ₂	60 ¹ / ₂	63 ¹ / ₂	64 ¹ / ₂	60 ¹ / ₂	61 ¹ / ₂	61 ¹ / ₂
South-Western	Stock	Stock	Stock	100	100	100	77	73	76 ¹ / ₂	77	78 ¹ / ₂	79	72 ¹ / ₂	75 ¹ / ₂	76 ¹ / ₂
York, Newcastle, & Berwick	Stock	Stock	Stock	100	100	100	61 ¹ / ₂	63	64 ¹ / ₂	64	65 ¹ / ₂	67	60	62	64
York and North Midland.....	Stock	Stock	Stock	100	100	100	47	46 ¹ / ₂	48	47	50	50 ¹ / ₂	44	46 ¹ / ₂	46 ¹ / ₂
Northern of France	20	20	20	16	16	20	38 ¹ / ₂	38 ¹ / ₂	34 ¹ / ₂	34 ¹ / ₂	34 ¹ / ₂	36 ¹ / ₂	32	33 ¹ / ₂	34 ¹ / ₂
East Indian	20	20	20	20	20	20	23 ¹ / ₂	23 ¹ / ₂	23 ¹ / ₂	23 ¹ / ₂	24 ¹ / ₂	24 ¹ / ₂	22 ¹ / ₂	23 ¹ / ₂	23 ¹ / ₂

Average Price of Meat as sold in Smithfield Market in the Months of October, November, and December, 1853.

[Supplied by the Board of Trade.]

Description.	Oct.		Nov.		Dec.		Oct.		Nov.		Dec.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Inferior Beasts	2	10	3	6	3	8	3	2	3	8	3	4
2nd class	3	6	4	0	4	2	3	10	4	6	4	8
3rd class	4	0	4	0	4	10	4	10	4	10	4	6
4th class (Scots)	4	2	4	10	5	4	5	2	4	10	4	10
Inferior Sheep .....	...	...	...	...	...	...	...	...	...	...	...	...
2nd class .....	...	...	...	...	...	...	...	...	...	...	...	...
3rd do. (long coarse woolled) .....	...	...	...	...	...	...	...	...	...	...	...	...
4th do. (South Down) .....	...	...	...	...	...	...	...	...	...	...	...	...
Lambs .....	...	...	...	...	...	...	...	...	...	...	...	...
Coarse Calves .....	...	...	...	...	...	...	...	...	...	...	...	...
Small Prime Calves .....	...	...	...	...	...	...	...	...	...	...	...	...
Large Hogs .....	...	...	...	...	...	...	...	...	...	...	...	...
Small Neat Porkers .....	...	...	...	...	...	...	...	...	...	...	...	...

N.B.—Price of Meat at the rate of 8 lbs. Avordupois to the stone, sinking the offal.

Fluctuations in the Stock and Share Markets during the Year 1853.

Security.	Price on the 1st of January.	Highest Price during the Year.	Lowest Price during the Year.	Price on the 31st of December.
Consols	100 $\frac{1}{2}$	101	90 $\frac{3}{4}$	93 $\frac{3}{4}$
Exchequer Bills	70s. Pm.	72s. Pm.	16s. Dis.	7s. Pm.
RAILWAYS—				
Brighton	108 $\frac{1}{2}$	109	92	99
Caledonian	67 $\frac{3}{4}$	71	45 $\frac{3}{4}$	53 $\frac{3}{4}$
Eastern Counties	13 $\frac{1}{2}$	13 $\frac{3}{4}$	11 $\frac{1}{2}$	13 $\frac{1}{8}$
Great Northern	82 $\frac{1}{8}$	90 $\frac{1}{2}$	68 $\frac{1}{4}$	84
Great Western	95 $\frac{5}{8}$	95 $\frac{5}{8}$	77 $\frac{1}{4}$	83
London and North Western	126 $\frac{1}{8}$	126 $\frac{1}{2}$	98	103
Midland	80 $\frac{3}{4}$	81	54	62 $\frac{1}{4}$
North Staffordshire ..	13 $\frac{5}{8}$	13 $\frac{3}{4}$	10 $\frac{3}{4}$	11 $\frac{1}{8}$
South-Eastern	84 $\frac{7}{8}$	85 $\frac{5}{8}$	55 $\frac{3}{8}$	60 $\frac{1}{2}$
South-Western	92 $\frac{5}{8}$	93	72	77
York, Newcastle, and Berwick	73 $\frac{1}{2}$	74	56	63 $\frac{1}{2}$
York and North Midland	60 $\frac{1}{2}$	65	41	47
Northern of France	35 $\frac{3}{8}$	37 $\frac{5}{8}$	32	34
East Indian	27	27	22 $\frac{3}{4}$	23 $\frac{1}{4}$

A Return of the Bathing and Washing at the Public Baths and Washhouses in London, which are conducted under or in accordance with the Acts 9 and 10 Vic., cap. 74, and 10 and 11 Vic., cap. 61, and at a few out of the many similar establishments in the country, for the year ended the 31st of December, 1853.

Name of the Establishment.	Number of Bathers.	Number of Washers.	Total Receipts.		
<i>Metropolis.</i>			£	s.	d.
1. The Model, Whitechapel	156,110	42,589	2,976	7	8
2. St. Martin-in-the-Fields	155,418	46,337	3,007	5	10
3. St. Marylebone	155,827	37,061	2,498	2	3
4. St. Margaret and St. John, Westminster	111,392	66,644	2,204	12	5
5. Greenwich	61,782	8,815	995	11	4
6. St. James, Westminster	111,870	35,829	2,038	10	11
7. Poplar	41,490	10,714	845	15	10
8. St. Giles and Bloomsbury (opened June 30th) ..	83,810	21,051	1,546	3	0
Totals	877,699	269,040	16,112	9	3
<i>Country.</i>					
Liverpool	188,450	11,480	4,042	13	0
Hull	52,142	7,579	612	8	7
Bristol	40,262	11,068	599	11	2
Preston	29,296	10,376	405	10	5
Birmingham	98,396	5,547	1,854	14	5
Maidstone	31,221	5,773	348	8	10

The Return does not include the bathing and washing at the George Street and the Lambeth establishments, which are not regulated by the Public Acts.

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week ended on a Saturday, for the Third Quarter of 1853.

[Compiled from the "London Gazette."]

ISSUE DEPARTMENT.

Date.	Notes Issued.	Notes in hands of Public.	Government Debt.	Other Securities.	Gold Coin and Bullion.	Silver Bullion.
1853.	£	£	£	£	£	£
July 2 ...	32,052,080	22,847,820	11,015,100	2,981,900	18,032,926	19,154
" 9 ...	31,908,800	23,806,980	11,015,100	2,981,900	17,889,616	19,154
" 16 ...	31,549,855	23,888,060	11,015,100	2,981,900	17,530,701	19,154
" 23 ...	31,460,085	23,627,090	11,015,100	2,981,900	17,440,931	19,154
" 30 ...	31,322,800	23,352,290	11,015,100	2,981,900	17,303,646	19,154
Aug. 6 ...	31,052,235	23,522,795	11,015,100	2,981,900	17,033,081	19,154
" 13 ...	30,963,249	23,100,015	11,015,100	2,981,900	16,944,086	19,154
" 20 ...	30,647,690	23,002,810	11,015,100	2,981,900	16,628,536	19,154
" 27 ...	30,531,650	22,776,305	11,015,100	2,981,900	16,531,650	19,154
Sept. 3 ...	30,162,640	22,465,945	11,015,100	2,981,900	16,162,640	...
" 10 ...	29,866,770	22,197,680	11,015,100	2,981,900	15,866,770	...
" 17 ...	29,399,075	22,421,920	11,015,100	2,981,900	15,399,075	...
" 24 ...	28,065,880	20,935,445	11,015,100	2,981,900	15,065,880	...

BANKING DEPARTMENT.

Date.	Proprietors' Capital.	Rest.	Public Deposits.	Other Deposits.	Seven Day and other Bills.	Total Dr.
1853.	£	£	£	£	£	£
July 2 ...	14,553,000	3,119,789	5,615,362	12,504,620	1,372,612	37,195,413
" 9 ...	14,553,000	3,210,137	3,953,330	13,508,613	1,409,150	36,631,230
" 16 ...	14,553,000	3,240,220	2,332,814	13,422,004	1,408,893	34,956,931
" 23 ...	14,553,000	3,243,581	1,819,658	13,179,833	1,466,458	34,292,535
" 30 ...	14,553,000	3,248,703	2,175,865	12,755,033	1,458,357	34,190,363
Aug. 6 ...	14,553,000	3,312,683	2,218,227	12,175,528	1,576,361	34,165,799
" 13 ...	14,553,000	3,344,226	3,315,392	12,160,020	1,416,224	34,181,862
" 20 ...	14,553,000	3,351,848	4,063,046	11,623,563	1,182,038	35,073,515
" 27 ...	14,553,000	3,291,440	4,601,685	11,133,356	1,465,519	35,045,030
Sept. 3 ...	14,553,000	3,634,523	4,701,598	11,017,313	1,447,059	35,353,493
" 10 ...	14,553,000	3,611,708	5,251,010	10,862,058	1,420,788	35,728,564
" 17 ...	14,553,000	3,658,265	6,007,833	11,053,973	1,435,982	36,709,053
" 24 ...	14,553,000	3,665,581	6,712,265	10,839,185	1,457,613	37,227,644

Date.	Government Securities.	Other Securities.	Notes.	Gold and Silver Coin.	Total Cr.
1853.	£	£	£	£	£
July 2 ...	13,116,997	14,372,531	9,204,260	561,825	37,195,413
" 9 ...	14,497,333	13,659,203	8,101,820	354,874	36,631,230
" 16 ...	13,757,333	13,064,310	7,661,795	473,493	34,956,931
" 23 ...	13,537,333	12,553,613	7,832,995	369,194	34,292,535
" 30 ...	13,347,333	12,466,213	7,970,510	416,307	34,190,363
Aug. 6 ...	13,037,333	13,236,701	7,520,110	382,325	34,165,799
" 13 ...	13,027,582	13,611,721	7,863,225	316,334	34,848,862
" 20 ...	13,027,582	13,876,950	7,614,880	524,103	35,073,515
" 27 ...	13,027,582	13,830,835	7,755,345	431,263	35,045,030
Sept. 3 ...	12,773,176	14,516,194	7,696,695	337,428	35,353,493
" 10 ...	12,767,018	14,957,874	7,669,090	334,582	35,728,564
" 17 ...	12,527,893	16,740,682	6,977,155	463,323	36,709,053
" 24 ...	12,339,083	17,143,223	7,130,435	614,903	37,227,644

CURRENCY.—Continued.

COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in England and Wales in each week, ended on a Saturday, for the Third Quarter of 1853.—
(Continued from page 288, vol. xvi.)

[Compiled from the "London Gazette."]

ENGLAND AND WALES.			
Date.	Private Banks.	Joint Stock Banks.	Total.
1853.	£	£	£
June 18.....	3,685,091	3,008,993	6,694,084
" 23.....	3,695,683	3,020,100	6,715,783
July 2.....	3,718,741	3,011,202	6,729,943
" 9.....	3,773,036	3,031,111	6,804,147
" 16.....	3,753,687	3,045,502	6,799,189
" 23.....	3,731,774	3,027,921	6,759,695
" 30.....	3,693,099	2,966,060	6,659,158
Aug. 6.....	3,671,529	2,936,142	6,607,671
" 13.....	3,658,084	2,965,160	6,623,244
" 20.....	3,658,903	2,978,700	6,637,603
" 27.....	3,650,252	2,989,994	6,640,246
Sept. 3.....	3,737,175	3,004,385	6,741,560
" 10.....	3,691,276	3,044,598	6,735,874
" 17.....	3,740,129	3,072,674	6,812,803
" 24.....	3,814,884	3,091,925	6,906,809

Fixed Issues—Private Banks, £4,655,619; Joint Stock Banks, £3,409,987.

Average amount of Promissory Notes in Circulation in Scotland and Ireland during the Months ended the 9th of July, the 6th of August, and the 3rd of September, 1853.—(Continued from page 288, vol. xvi.)

SCOTLAND.			
Date.	£5 and above.	Under £5.	Total.
1853.	£	£	£
July 9.....	1,288,347	2,473,287	3,761,634
Aug. 6.....	1,274,438	2,472,343	3,746,781
Sept. 3.....	1,236,480	2,492,407	3,728,887

IRELAND.			
Date.	£5 and above.	Under £5.	Total.
1853.	£	£	£
July 9.....	2,460,592	2,713,032	5,173,624
Aug. 6.....	2,456,968	2,702,465	5,159,433
Sept. 3.....	2,427,810	2,802,574	5,230,384

Fixed Issues—Scotland, £3,087,209; Ireland, £6,354,494.

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week ended on a Saturday, for the Fourth Quarter of 1853.

[Compiled from the "London Gazette."]

ISSUE DEPARTMENT.

Date.	Notes Issued.	Notes in hands of Public.	Government Debt.	Other Securities.	Gold Coin and Bullion.	Silver Bullion.
1853.	£	£	£	£	£	£
October 1	29,031,895	22,774,375	11,015,100	2,984,900	15,031,895	...
" 8	29,202,455	22,840,565	11,015,100	2,984,900	15,202,455	...
" 15	28,679,875	23,667,385	11,015,100	2,984,900	14,679,875	...
" 22	28,358,955	23,145,115	11,015,100	2,984,900	14,358,955	...
" 29	28,658,850	22,987,350	11,015,100	2,984,900	14,658,850	...
November 5	29,047,330	22,627,445	11,015,100	2,984,900	15,047,330	...
" 12	29,187,175	22,181,425	11,015,100	2,984,900	15,187,175	...
" 19	29,150,715	21,590,735	11,015,100	2,984,900	15,150,715	...
" 26	28,394,025	21,344,200	11,015,100	2,984,900	14,394,025	...
December 3	28,446,590	21,205,800	11,015,100	2,984,900	14,406,590	...
" 10	28,620,635	21,045,460	11,015,100	2,984,900	14,620,635	...
" 17	28,729,730	20,605,625	11,015,100	2,984,900	14,729,730	...
" 24	29,128,435	20,810,155	11,015,100	2,984,900	15,128,435	...

BANKING DEPARTMENT.

Date.	Proprietors' Capital.	Resst.	Public Deposits.	Other Deposits.	Seven Day and other Bills.	Total Dr.
1853.	£	£	£	£	£	£
October 1	14,553,000	3,682,113	6,738,755	11,585,565	1,443,636	38,203,660
" 8	14,553,000	3,691,119	6,887,398	11,633,687	1,453,952	38,189,156
" 15	14,553,000	3,161,161	3,700,859	12,664,226	1,405,693	35,484,329
" 22	14,553,000	3,170,823	2,903,045	12,390,653	1,371,064	34,388,585
" 29	14,553,000	3,175,193	3,628,869	12,322,678	1,357,396	35,637,376
November 5	14,553,000	3,184,275	4,077,159	12,171,082	1,314,455	35,299,951
" 12	14,553,000	2,211,460	5,009,222	11,781,769	1,317,931	35,873,382
" 19	14,553,000	3,217,322	6,034,154	11,632,208	1,259,013	36,695,697
" 26	14,553,000	3,184,137	7,534,179	11,012,132	1,267,637	37,550,785
December 3	14,553,000	3,175,626	7,659,924	11,180,162	1,226,912	38,095,624
" 10	14,553,000	3,181,817	10,027,166	10,910,077	1,192,741	39,561,801
" 17	14,553,000	3,189,690	10,492,686	10,699,684	1,183,916	40,118,376
" 24	14,553,000	3,198,455	11,157,724	10,607,922	1,179,166	40,696,267

Date.	Government Securities.	Other Securities.	Notes.	Gold and Silver Coin.	Total Cr.
1853.	£	£	£	£	£
October 1	12,339,083	19,124,799	6,258,520	580,667	38,203,069
" 8	12,339,083	18,941,519	6,361,900	546,624	38,189,156
" 15	12,455,161	17,425,089	5,012,490	591,599	35,484,329
" 22	11,519,072	17,254,452	5,213,810	601,251	34,388,585
" 29	11,498,152	17,255,890	5,671,509	611,834	35,087,376
November 5	11,498,152	16,749,699	6,419,885	632,215	35,299,951
" 12	11,766,243	16,432,451	7,005,750	668,988	35,873,382
" 19	12,477,425	15,989,650	7,559,950	668,612	36,695,697
" 26	13,489,037	16,315,862	7,049,825	696,061	37,550,785
December 3	13,622,039	16,586,818	7,200,790	685,977	38,095,624
" 10	15,043,730	16,525,237	7,575,175	720,659	39,861,801
" 17	15,043,730	16,237,015	8,124,105	713,526	40,118,376
" 24	15,043,730	16,643,651	8,318,280	690,696	40,696,267

CURRENCY.—*Continued.*

COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in England and Wales in each Week ended on a Saturday, for the Fourth Quarter of 1853.

[Compiled from the "London Gazette."]

ENGLAND AND WALES.			
Date.	Private Banks.	Joint Stock Banks.	Total.
1853.	£	£	£
Oct. 1.....	3,901,313	3,090,316	6,991,629
„ 8.....	4,008,444	3,161,651	7,170,095
„ 15.....	4,091,988	3,207,628	7,299,616
„ 22.....	4,100,112	3,167,038	7,267,150
„ 29.....	4,072,606	3,115,420	7,188,026
Nov. 5.....	4,042,751	3,109,935	7,152,686
„ 12.....	3,991,797	3,142,514	7,134,311
„ 19.....	3,937,665	3,129,467	7,067,132
„ 26.....	3,899,763	3,101,563	7,001,326
Dec. 3.....	3,870,682	3,081,656	6,952,338
„ 10.....	3,838,451	3,065,714	6,904,165
„ 17.....	3,817,139	3,043,302	6,860,441
„ 24.....	3,713,706	3,033,300	6,747,006

Fixed Issues—Private Banks, £4,616,609; Joint Stock Banks, £3,325,857.

Average amount of Promissory Notes in Circulation in Scotland and Ireland during the Months ended the 1st of October, the 29th of October, the 26th of November, and the 24th of December, 1853.

SCOTLAND.			
Date.	£5 and above.	Under £5.	Total.
1853.	£	£	£
Oct. 1.....	1,280,792	2,562,431	3,843,223
„ 29.....	1,345,521	2,642,072	3,987,686
Nov. 26.....	1,442,880	2,843,604	4,286,484
Dec. 24.....	1,365,123	2,747,656	4,112,784

IRELAND.

Date.	£5 and above.	Under £5.	Total.
1853.	£	£	£
Oct. 1.....	2,471,833	3,039,159	5,510,983
„ 29.....	2,744,888	3,522,163	6,267,051
Nov. 26.....	2,752,074	3,627,145	6,379,219
Dec. 24.....	2,749,022	3,704,203	6,453,225

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STATISTICAL SOCIETY.

JUNE, 1854.

Twentieth Anniversary Meeting of the Statistical Society.
-Session 1853-54.

[Held at No. 12, St. James's Square, London, Wednesday, 15th March, 1854.]

THE RIGHT HON. THE EARL FITZWILLIAM, K.G., F.R.S., *President,*
in the Chair.

The Secretary read the following Report of the Council on the progress of the Society during the past year:—

Report of the Council.

THE Council of the Statistical Society are happy to be able to meet the Fellows, at this their Twentieth Anniversary Meeting, with congratulations on the highly satisfactory condition of the Society's affairs.

Though the Society has, since the last Report, sustained unusual losses by deaths and by resignations, the new elections, which have amounted to thirty-two in number, have left a slight balance in its favour.

In reference to the financial condition of the Society, the Council are in a condition to repeat the satisfactory statement of last year, "that all its sources of income for the past year exhibit an increase over the corresponding items in the account of the previous year."

The subscriptions and compositions for the year ending 31st December last exceed the very large receipts of the previous year by 15*l.*; the sale of the Journal is in excess of the same source of income for the same year by 20*l.*; while the very satisfactory arrangement with the Institute of Actuaries, which was alluded to in the last Report, has added a new source of income to the amount of 75*l.* From these three sources the Society has added to its receipts to the extent of nearly 110*l.* By the arrangement with the Institute of Actuaries, the expenditure of the Society in one or two material items is also economized.

The Council would especially invite the attention of the Fellows to the increasing sale of the Journal, as affording an indication of the growing estimation in which the Society is held. In 1851, the Society derived from the sale of its Journal a sum of 50*l.*; in 1852,

the receipts amounted to 70*l.*; and in the last year to 90*l.* The Council have reason to believe that the publication of the Index to the first fifteen volumes, to which a more lengthened allusion will presently be made, will lead to a still further augmentation of this branch of the Society's receipts.

On the side of the expenditure, the financial transactions of the Society for the past year are equally satisfactory, though they stand in need of some explanation. The current ordinary expenditure of the year slightly exceeded 700*l.*, and fell short of the current income by upwards of 200*l.* After defraying the usual current expenses, the Council were able to discharge a liability for printing the Journal for three-quarters of a year, amounting to 182*l.* 5*s.* 9*d.*, and a smaller liability of 10*l.* 7*s.* for stationery, as well as to vote a sum of 25*l.* on account of the General Index. Owing to these causes, the total payments of the year 1853 slightly exceeded the income of the year.

The Council are happy to state, that on the 1st of January, of the present year, the Society had but one liability, being a sum owing for printing the Journal, to the amount of 135*l.* 2*s.* 9*d.* That liability has been since discharged; and as there is good reason to calculate on the income for the year 1854 exceeding the current expenditure by upwards of 200*l.*, the Council hope to be able to congratulate the Fellows, at their next anniversary meeting, not only on having commenced the current year free from debt, but on possessing a surplus, to devote to the extension and improvement of the library, to original inquiries, or to other purposes of importance.

The Council, indeed, have already devoted a portion of the funds at their disposal to a highly useful purpose, of which mention was made in their Report of last year. They allude to the General Index to the first fifteen volumes of the Journal. This useful work they have entrusted to the able and practised hands of Mr. Wheatley, the bibliographer and librarian. The Index is now passing through the press, and will shortly be published. The Council have made arrangements for supplying the work to the Fellows at a moderate cost; and they anticipate such a demand for it as will enable them to defray the expense of its publication, without incurring any fresh liability.

The additions made to the library during the past year are considerable. They comprise a second collection of books from Dr. Edward Jarvis, of Dorchester, Massachusetts; a donation of upwards of fifty volumes of standard Italian and French works, presented by Signor Fabrizio Fabiani, of Genoa; and a valuable and complete collection of documents, comprising the Statistics of the kingdom of Sardinia, from Signor G. Flechia, Librarian and Keeper of the Archives of the Senate of the kingdom of Sardinia, presented through the medium of Colonel Sykes. The Council have also authorized the expenditure of a larger sum than usual for the improvement of the library, which sum has been devoted chiefly to the completion of sets of valuable statistical works of reference. Among the works so completed, may be mentioned "*The Annual Register*" and the "*Annales d'Hygiène et de Médecine Légale*;" and among the works which have been brought nearly to a state of completion, the

Financial Accounts of the United Kingdom. A few scarce early numbers of this valuable official series are still wanting.

Since the last anniversary meeting, eight communications have been read and discussed. Colonel Sykes, whose temporary absence the Council have had great reason to regret, has added to his valuable series of communications on Indian Statistics a paper on the Administration of Civil and Criminal Justice in British India; Mr. Neison has contributed a very complete analytical view of Railway Accidents, of which the first part has already appeared in the pages of the Journal; and Dr. Guy has extended his short series of financial papers by a communication on the Immediate and Remote Effect of the Remission of Customs and Excise Duties on the Productiveness of those branches of the Revenue. The Society is indebted to Mr. Thomas Beggs for an interesting communication on Freehold Land Societies; and to Mr. Samuel Paull, for furnishing the occasion of an animated discussion on the important subject of Agricultural Statistics. The department of Vital Statistics has been illustrated by two communications, the one from Dr. Guy, on the Duration of Life among Medical Men; the other by Dr. A. S. Thomson, on the Physical Developments of the New Zealand Race of Men.

One communication made to the Society since the last anniversary meeting is deserving of special mention. The Council allude to the *Résumé*, by Mr. Leone Levi, of the Proceedings of the Statistical Congress, held at Brussels, in the Autumn of 1853. This *résumé*, which was presented to the Society at their first meeting of the present session, and which is printed in the last number of the Society's Journal, gives a very complete account of the proceedings of that interesting and important Congress. The Statistical Society of London was represented on that occasion by Viscount Ebrington, one of its members; Mr. Farr, who was charged with the duty of representing an important department of the Government, Mr. Leone Levi, and other Fellows of this Society, were also present, and took part in the deliberations of the Congress. An opportunity having been thus afforded to members of the Society to form a personal acquaintance with distinguished statisticians from all the leading states of Europe, a considerable addition has been made to our list of Foreign Honorary Members. The following are the names which the Fellows, acting on the recommendation of the Council, have added to the list:—

- M. LE BARON DE CZOERNIG, Chef de Section au Ministère du Commerce et des Travaux Publics, and Directeur de la Statistique Administrative, at Vienna.
- M. F. G. DE HERMANN, Conseiller au Ministère des Finances, at Munich.
- M. BERGSOE, Professeur d'Economie Politique et Chef du Département de la Statistique, at Copenhagen.
- M. ALFRED LEGOYT, Chef du Bureau de Statistique Générale de France, au Ministère de l'Agriculture, du Commerce, et des Travaux Publics.
- M. CHARLES MITTERMAIER, Conseiller intime, and Professeur à l'Université de Heidelberg.
- M. CHARLES GUILLAUME ASHER, Docteur en Droit, at Hamburg.
- M. DE BAUMHAUER, Chef du Bureau de Statistique, au Ministère de l'Intérieur, at the Hague.
- M. D'AVILA, Ministre d'Etat honoraire et Député des Cortès, Portugal.
- M. ERNEST ENGEL, Chef du Bureau de Statistique Générale, at Dresden.
- M. BERNARDIN BERTINI, Deputy to the Sardinian Parliament at Turin.
- M. MARC D'ESPINE, Docteur en Médecine, at Geneva.

The name of Signor Fabrizio Fabiani, of Genoa, whose liberal donation to the library has been already mentioned, has also been proposed for addition to the list of Corresponding Members.

On the other hand, the list of Foreign Honorary Members is unhappily diminished by the decease of M. Hoffman, President of the Statistical Bureau at Berlin.

The Council also announce with much regret the loss which they have recently sustained of the services of Mr. F. G. P. Neison, as one of the Honorary Secretaries; but though the state of his health and his numerous engagements do not allow of his giving the Society the benefit of his co-operation in an official capacity, the Council trust that they shall continue to profit by those valuable communications for which they are already so largely indebted to him. The vacancy occasioned by the resignation of Mr. Neison has not yet been filled up.

The President addressed the meeting at some length on the subject of the Report, and in the course of his remarks expressed a hope that the improved state of its finances would enable the Society, at no very distant period, to resume its original investigations. He had examined the plan of the General Index referred to in the Report, and he highly approved it.

Mr. Hodge moved, and Dr. Camps seconded, the adoption of the Report, together with the Abstract of Receipts and Expenditure.

Dr. Guy moved, and the Right Hon. Holt Mackenzie seconded, and it was Resolved,

That clause 7 of the Regulations of the Society shall stand thus:—

7. All yearly payments are due in advance on the 1st of January, and if any Fellow of the Society have not paid his subscription before the 1st of July, he shall be applied to in writing by the Secretaries, and if the same be not paid before the 1st of January of the second year, a written application shall again be made by the Secretaries, and the Fellow in arrear shall cease to receive the Society's publications, and shall not be entitled to any of the privileges of the Society until such arrears are paid; and if the subscription be not discharged before the 1st of February of the second year, the name of the Fellow thus in arrear shall be exhibited as a defaulter on a card suspended in the Meeting Rooms; and if, at the next Anniversary Meeting, the amount still remain unpaid, the defaulter shall be announced to be no longer a Fellow of the Society, the reason for the same being at the same time assigned. No Fellow of the Society can withdraw his name from the Society's books, unless all arrears be paid; and no resignation will be deemed valid unless a written notice thereof be communicated to the Secretaries. No Member shall be entitled to vote at any meeting of the Society until he shall have paid his subscription for the current year.

A ballot was then taken for the President, Council, and Officers for the year ensuing, and the following was declared to be the List:—

President.

The Right Hon. Charles William, Earl Fitzwilliam, K.G., F.R.S.

Council.

James Bird, M.D.
 Sir John P. Boileau, Bart., F.R.S.
 Lord Alfred Churchill
 John Towne Danson, Esq.
 *Viscount Ebrington
 William Farr, Esq.
 The Right Hon. Charles William, Earl
 Fitzwilliam, K.G., F.R.S.
 J. W. Gilbert, Esq., F.R.S.
 The Right Hon. W. E. Gladstone, M.P.
 William Augustus Guy, M.B.
 *The Right Hon. The Earl of Harrowby
 James Heywood, Esq., M.P., F.R.S.
 Thomas Hodgkin, M.D.
 *Joseph Hume, Esq., M.P., F.R.S.
 *Charles Jellicoe, Esq.
 William Golden Lumley, Esq.

The Right Hon. Holt Mackenzie, F.G.S.
 *Horace Mann, Esq.
 William Newmarch, Esq.
 William Drummond Oswald, Esq.
 The Right Hon. Lord Overstone
 The Right Rev. The Lord Bishop of
 Oxford, F.R.S., V.P.A.S.
 *The Right Hon. Sir J. Somerset Paking-
 ton, Bart., M.P.
 Benjamin Phillips, Esq., F.R.S.
 Sir G. Staunton, Bart., M.P., F.R.S.
 Lieut.-Colonel W. H. Sykes, F.R.S.
 Sir J. Emerson Tennent
 Thomas Tooke, Esq., F.R.S.
 Lord Harry George Vane
 Lord Wodehouse
 Rev. E. Wyatt-Edgell

** Those marked thus are New Members.*

Treasurer.

Benjamin Phillips, Esq., F.R.S.

Honorary Secretaries.

William Drummond Oswald, Esq.
 William Augustus Guy, M.B.

Lord Overstone, on rising to move a vote of thanks to the noble Chairman, took occasion to refer to the services which Earl Fitzwilliam had rendered to the Society, not only during the past year, but during his former tenure of the same office; as well as to the great benefits which he had conferred on statistical science, by contributing to obtain its recognition, as a distinct branch of science, at one of the early meetings of the British Association. After some observations to the same effect had been offered by Colonel Sykes, who, as one of the original founders of the Society, bore testimony to Earl Fitzwilliam's zealous exertions on behalf of statistical science at a time when the meaning of the term statistics was scarcely understood, and its objects imperfectly appreciated; the motion was seconded by Dr. Camps.

The motion having been put to the vote, was carried unanimously; and after a few words of acknowledgment from the noble Chairman, the meeting adjourned.

On the Relation of the Price of Wheat to the Revenue derived from Customs and Excise Duties. Communicated by DR. GUY.

[Read before the Statistical Society, 20th March, 1854.]

I MUST begin this communication by reminding the Society that this is the fifth of a series of financial papers relating to the fluctuations in the revenue, and the connection existing between those fluctuations and the price of wheat. The first two papers of the series had reference solely to the effect produced on the revenue of this country by the remission or increase of taxes; and, in all probability, I should have contented myself with this limited contribution to Financial Statistics, had it not been that the discussion on the second of these papers elicited from the late Mr. Porter an expression of opinion as to the cause of the fluctuations in our revenue, in which expression of opinion (at least in the strong and decided terms in which it was couched) I could not coincide. Mr. Porter, it will be recollected, attributed the flourishing condition of our finances and the success of our financial operations, in favourable years, to a low price of wheat; and the opposite results, in unfavourable years, to a high price of that first necessary of life. Having remarked, as I then believed, one or two striking exceptions to this general rule, and deeming the subject one of great interest, I was led to test the soundness of Mr. Porter's opinion by means of figures, and to lay the results before the Society.* Those results were embodied in five distinct propositions, of which the first was to the following effect:—"The influence of the price of wheat on the revenue is not such as to establish a very close and uniform relation between the one and the other; for equal prices of wheat do not coincide with equal amounts of revenue, nor equal amounts of revenue with equal prices of wheat; while cycles of years of rising and falling prices are found to correspond with diminishing and increasing amounts of revenue indifferently; and even those numerical results which seem to indicate the closest relation between the price of wheat and the revenue display exceptions and irregularities which tend to impair the evidence they afford." The soundness of that part of the foregoing proposition which refers to cycles of years of rising prices was shown by two cases in point: that of the four years from 1822 to 1825 inclusive, when the price of wheat rose progressively from 43s. to 66s., and yet, in spite of a reduction of taxation to the amount of more than 11 millions, the revenue suffered only to the extent of 1½ millions; and that of the five years from 1835 to 1839 inclusive, when the price of wheat rose progressively from 39s. to 71s., and yet the revenue, in the face of a reduction of more than a million of taxes, increased 2 millions.

It was but natural that, in discussing the paper just referred to, a distinction should be drawn between the entire revenue of the country and that part of it which is derived from taxes on necessities and luxuries largely consumed by the people, and that the advocates of the opinion so strongly entertained by Mr. Porter should expect to find a coincidence between the relation of the price of wheat and the amount of the customs and excise duties more exact than that

* See the *Journal of the Statistical Society*, March, 1853.

existing between the price of wheat and the revenue from all sources. Accordingly, when my paper on the relation of the price of wheat to the revenue was discussed by the Society, a very general wish was expressed that I would extend the inquiry so as to embrace the effect produced by the price of wheat on that part of the revenue derived from the customs and excise. The paper "On the immediate and remote effect of the Remission of Customs and Excise Duties on the Productiveness of those branches of the Revenue" was prepared in obedience to the desire so expressed. It was intended to pave the way for that inquiry into the relation of the price of wheat to the revenue from customs and excise duties which forms the subject of the present communication.

In submitting this new question to the test of figures, I shall profit by the results of former inquiries so far as to employ from the first the yield of the customs and excise duties, less the receipts from wheat and wheat-flour, in connection with the average price of wheat, as my data; my experience having shown that those data give results most favourable to Mr. Porter's theory. The data in question are embodied in the following table, in which the years are arranged in

TABLE I.

Year.	Price of Wheat.		Customs and Excise.	Receipts from Wheat and Wheat Flour.	Customs and Excise, Less Duties on Wheat, &c.
	s.	d.	£	£	£
1839.....	70	8	35,093,633	670,447	34,423,186
1847.....	69	9	32,908,108	3,981	32,904,127
1825.....	66	6	37,546,011	223,399	37,322,612
1831.....	66	4	32,819,296	342,220	32,477,076
1840.....	66	4	35,536,468	896,996	34,639,472
1829.....	66	3	36,751,851	625,224	36,126,627
1838.....	64	7	34,478,417	145,246	34,333,171
1841.....	64	4	35,577,680	431,590	35,146,090
1830.....	64	3	36,184,707	537,662	35,647,045
1824.....	62	0	38,095,781	9,416*	38,086,365
1828.....	60	5	37,995,094	72,826	37,922,268
1832.....	58	8	33,406,029	263,561	33,142,468
1842.....	57	3	33,542,791	1,194,614	32,348,177
1826.....	56	11	36,452,731	177,227	36,275,504
1827.....	56	9	36,333,112	606,521	35,726,591
1837.....	55	10	33,958,420	304,638	33,653,782
1846.....	54	8	34,557,219	595,477	33,961,742
1833.....	52	11	32,752,652	21,956	32,730,696
1823.....	51	9	36,841,590	10,310*	36,831,280
1844.....	51	3	35,812,872	690,560	35,122,312
1845.....	50	10	33,782,439	96,385	33,686,054
1848.....	50	6	35,153,187	456,093	34,697,094
1843.....	50	1	33,911,246	624,775	33,286,471
1836.....	48	6	36,042,885	8,591	36,034,294
1834.....	46	2	33,294,552	17,087	33,277,465
1849.....	44	3	34,622,284	296,025	34,326,259
1822.....	43	3	37,947,025	Nil.	37,947,025
1850.....	40	3	34,758,254	261,532	34,496,722
1835.....	39	4	33,615,273	7,715	33,607,558
1851.....	38	5	35,057,419	290,437	34,766,982

* In these years the returns were limited to Great Britain.

the order of the price of wheat, beginning with the year of highest price.

Following as closely as possible the line of examination adopted in the Essay on the "Relation of the Price of Wheat to the Revenue," I begin by comparing six different groups of dearest and cheapest years with each other. This comparison is made in the following table:—

TABLE II.

Number of Years.	Dear Years.		Cheap Years.		Average Difference.
	Average Price of Wheat.	Average Yield of Customs and Excise.*	Average Price of Wheat.	Average Yield of Customs and Excise.*	
	<i>s.</i> <i>d.</i>		<i>s.</i> <i>d.</i>		
15	63 5	35,101,385	47 10	34,561,720	539,665†
12	65 0	35,180,876	46 5	34,839,959	340,917†
10	66 1	35,110,577	45 2	34,612,592	497,985†
7	67 2	34,603,751	42 11	34,922,329	318,578
5	67 11	34,353,295	41 1	35,028,909	675,614
3	69 0	34,949,975	39 4	34,290,421	659,554†

* Less proceeds of duty on Wheat and Wheat Flour.

† Average differences in favour of *dear* years.

It will be seen from this table, that in four out of the six groups of years the yield of customs and excise duties is greater in dear than in cheap years; and this unexpected result will appear the more surprising, when it is borne in mind that, in five out of six of the same groups of years, the total net ordinary value exhibited a very considerable difference in favour of the cheap years. This striking difference between the revenue from all sources and the produce of customs and excise will be more distinctly perceived by means of the following tabular arrangement:—

TABLE III.

Number of Years.	Ordinary Revenue. Average Difference in favour of		Customs and Excise. Average Difference in favour of	
	Cheap Years.	Dear Years.	Cheap Years.	Dear Years.
	£	£	£	£
15.....	1,730,321	.....	.....	539,665
12.....	1,786,497	.....	.....	340,917
10.....	1,547,586	.....	.....	497,985
7.....	2,924,650	.....	318,578	.....
5.....	2,448,866	.....	675,614	.....
3.....	.....	338,965	.....	659,554

Still following the line of inquiry adopted in the Essay on the "Relation of the Price of Wheat to the Revenue," I now proceed to consider what influence the price of wheat exercises on the yield of the customs and excise duties when the years following a high or a low price of wheat are substituted for the years in which the high or the low price occurs, the years so following high and low prices

respectively being thrown into groups of years, as in the two preceding tables. The following table, constructed on this principle, corresponds, it will be seen, with Table XII. of the Essay just referred to:—

TABLE IV.

Number of Years.	Dear Years.		Cheap Years.		Difference in Price of Wheat.	Annual Excess of Revenue from Customs and Excise in Cheap Years.	Annual Excess of Revenue from Customs and Excise in Cheap Years per shilling of Price.
	Average Price of Wheat.	Average Yield of Customs and Excise.	Average Price of Wheat.	Average Yield of Customs and Excise.			
	<i>s. d.</i>	£	<i>s. d.</i>	£	<i>s. d.</i>	£	£
14.....	63 10	34,570,650	48 6	34,649,151	15 4	78,501	5,233
12.....	65 0	34,581,337	47 5	34,820,901	17 7	239,564	13,309
10.....	66 1	34,611,872	46 5	34,648,698	19 8	36,826	1,841
7.....	67 2	34,852,980	44 7	34,930,418	22 7	77,438	3,366
5.....	67 11	34,780,125	42 8	35,147,367	25 3	367,242	14,690
3.....	69 0	35,204,023	40 11	35,877,519	28 1	673,496	24,053

A very casual inspection of this table would serve to prove that the relation existing between the price of wheat and the yield of customs and excise duties is not of a very uniform or exact kind; for the average yield of customs and excise in the column of dear years increases, with the single exception of the group of five years, as the price of wheat increases; while, on the other hand, the average yield of the customs and excise, in the column of cheap years, increases, with the single exception of the group of ten years, as the price falls. The true value and significance of the table, however, is not seen till a comparison is made between the results of this table and those of the corresponding table (Table XII.) in the Essay on the "Relation of the Price of Wheat to the Revenue." This comparison is made in the following table:—

TABLE V.

Number of Years.	Annual Excess in Cheap Years		Per-Centage Proportion of Annual Excess in Cheap Years to	
	Of Ordinary Revenue.	Of Revenue from Customs and Excise.	Ordinary Revenue in Cheap Years.	Customs and Excise in Cheap Years.
	£	£	£	£
14.....	1,693,123	70,501	3.38	0.23
12.....	2,068,973	239,564	4.12	0.68
10.....	2,217,860	36,826	4.40	0.10
7.....	1,355,156	77,438	2.72	0.22
5.....	1,467,160	367,242	2.94	1.04
3.....	1,196,900	673,496	2.37	1.87

In common with Tables II. and III., these tables (IV. and V.) tend to the same unexpected result, namely, that the yield of customs and excise duties is less affected by fluctuations in the price of wheat than the net ordinary revenue of which the customs and excise duties

form a part; for while Table III. showed that the net ordinary revenue and the revenue from customs and excise duties were so unequally affected by variations in the price of wheat as even to lead to numerical results diametrically opposed, Table V. exhibits a difference in the degree of dependence of the net ordinary revenue and of the revenue from customs and excise on the price of wheat scarcely less remarkable. This difference is strikingly shown in the last two columns of the foregoing table (Table V.), which contrast the per-centage proportion borne by the annual increase in cheap years in the net ordinary revenue and in the revenue from customs and excise to the total revenues of which respectively such annual increase constitutes a part. It will be seen that the increase in the net ordinary revenue, in cheap years, varies (according to the groups of years) from 2·37 to 4·40 per cent. of the net ordinary revenue in the cheap years; but that the corresponding increase in the yield of customs and excise duties varies (also according to the groups of years) from 0·10 to 1·87 per cent. In other words, the effect produced by a low price of wheat on the yield of the customs and excise duties is much less considerable than the effect produced by a low price of wheat on the net ordinary revenue of which the customs and excise duties form so considerable a part.

The next tabular comparison instituted in the Essay on the "Relation of the Price of Wheat to the Revenue," was intended to apply to the solution of the question discussed in that Essay a test of an opposite kind to those employed in the preceding part of the Essay. Instead of taking the price of wheat in different years, and calculating the amount of the net ordinary revenue in the same years, or in the years immediately following, the several years were arranged in two groups, according as their revenue happened to be above or below 50 millions, and the two averages thus obtained were compared with the average price of wheat for the same years, in order to ascertain whether a difference between the two amounts corresponded to a marked difference in the price of wheat. This question (the converse of those examined in previous tables) receives an answer, in respect of the yield of customs and excise duties, in the following table:—

TABLE VI.

15 Years above 34½ Millions.		15 Years below 34½ Millions.		Difference.
Price of Wheat.	Revenue from Customs and Excise.	Price of Wheat.	Revenue from Customs and Excise.	
<i>s.</i> <i>d.</i>	£	<i>s.</i> <i>d.</i>	£	£
56 6	36,152,771	54 9	33,510,330	2,642,441

An average difference, therefore, of more than 2½ millions, being about a fourteenth part of the larger average of upwards of 36 millions, is found to correspond to a difference in price of 1*s.* 9*d.*, or about one part in thirty-two of the larger of the two average prices; the larger average revenue from customs and excise corresponding, be it observed, to the highest average price of wheat. What relation these figures bear to the numerical results obtained in the case of the net

ordinary revenue, as shown in Table XIII. of the Essay on the "Relation of the Price of Wheat to the Revenue," will appear in the following table:—

TABLE VII.

	Years above Average.		Years below Average.		Difference of Price.	Difference of Revenue.
	Price of Wheat.	Revenue.	Price of Wheat.	Revenue.		
	s. d.	£	s. d.	£	s. d.	£
Ordinary Revenue	52 5	51,888,508	58 5	47,277,794	6 0	4,610,714
Customs and Excise	56 6	36,152,771	54 9	33,510,330	1 9	2,642,441

Here again, as in Table III., the yield of customs and excise duties is shown to obey a different law from the total ordinary revenue of which it forms a part. In the case of the ordinary revenue, a decrease of more than $4\frac{1}{2}$ millions of revenue, being about one-eleventh part of the higher average, coincides with an *increase* of 6s. in price, being less than the eighth part of the higher average price. But in the case of the revenue from customs and excise, a decrease of more than $2\frac{1}{2}$ millions, being about one-fourteenth of the higher average, coincides with a *decrease* of 1s. 9d. in price, being about one part in thirty of the higher price. The results obtained, in the case of the customs and excise, are, therefore, at variance with those obtained in the case of the net ordinary revenue, and equally at variance with the view which it would seem most natural to entertain.

In the Essay on the "Relation of the Price of Wheat to the Revenue," the question examined in the foregoing table was pursued more into detail in Table XIV.; and although the results obtained were not very important, I have prepared a corresponding table for the revenue from customs and excise, in order to avoid any objection which might possibly suggest itself in consequence of the omission. Table VIII. is the corresponding table to Table XIV. of the former Essay.

TABLE VIII.

Number of Years.	Customs and Excise.				Average Price of Wheat.	
	£				s. d.	
1	Above 38 millions.....				38,086,365	62 0
3	" 37 and less than 38 millions				37,730,635	56 9
4	" 36	" 37	"		36,316,926	55 10
4	" 35	" 36	"		35,410,504	59 2
7	" 34	" 35	"		34,526,126	53 7
7	" 33	" 34	"		33,516,506	50 8
4	" 32	" 33	"		32,615,019	61 7

The general tendency to low prices of wheat in years of large revenue, and to high prices of wheat in years of small revenue, which was pointed out as the general result to which Table XIV. of the former Essay led, does not exhibit itself in this table. On the con-

trary, in the case of the customs and excise duties, the general tendency is evidently towards an opposite state of things to that which was found to obtain in the case of the total net ordinary revenue. A fall of price is found to coincide with a fall of revenue instead of coinciding with an increase of revenue, towards which increase, as accompanying a low price of wheat, the prevalent opinion of the public evidently inclines. It will, however, be observed that the fall in the price of wheat, though it shows a general tendency to coincide with a fall in the revenue from customs and excise duties, is subject to two marked exceptions, and that the prices at the two ends of the scale only differ by five-pence, though the yield of the customs and excise duties differs by no less than 5,471,316*l*.

The following tabular comparison will show the difference which exists between the ordinary revenue and the revenue from customs and excise, as affected by variations in the price of wheat:—

TABLE IX.

Average Ordinary Revenue, Falling step by step from above 53 millions to below 46 millions. Prices of Wheat.		Revenue from Customs and Excise, Falling step by step from above 38 millions to below 33 millions. Prices of Wheat.	
<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
43	3	62	0
53	0	56	9
53	7	55	10
50	1	59	2
62	6	53	7
52	7	50	8
67	6	61	7
57	8	....
54	8	....

The next table which I have to submit to the Society corresponds with Table XV. of the former Essay, and contrasts the relation of the price of wheat in cycles of years of rising and falling prices respectively with the state of the revenue derived from customs and excise duties.

I would particularly invite the attention of the Society to this table, as to the one of which it forms the counterpart. It is scarcely possible to conceive a more delicate or conclusive test. If the price of wheat were what it has been so often represented to be, the most influential cause of fluctuations in the amount of the revenue, by what means could its intimate relation to the revenue be more distinctly displayed than by comparing a progressive increase or decrease of price through a short series of years with the yield of the revenue in the first and last years of the series? It will be recollected that the relation of the price of wheat to the revenue in the following year was shown to be more intimate than to the revenue of the same year. Now this mode of comparison obviously brings this more intimate relation into play. In a series of five years, for instance, the revenues of the second, third, fourth, and fifth years, are affected by the prices of the first, second, third, and fourth years; and not only so, but there is a cumulative effect of the high or low prices of all the

preceding years upon the last of the series, which, if the popular theory were well founded, could not fail to display itself in uniform and marked results.

TABLE X.
Prices Rising.

	Year.	Revenue from Customs and Excise.
<i>Four Years—1822 to 1825.</i>		
Price of wheat ranging from 43s. 3d. to 66s. 6d.	1822	£ 37,947,025
	1825	37,322,612
	Decrease	624,413
<i>Three Years—1827 to 1829.</i>		
Price of wheat ranging from 56s. 9d. to 66s. 3d.	1827	35,726,591
	1829	36,126,627
	Increase	400,036*
<i>Five Years—1835 to 1839.</i>		
Price of wheat ranging from 39s. 4d. to 70s. 8d.	1835	33,607,558
	1839	34,423,186
	Increase	815,628*
<i>Three Years—1845 to 1847.</i>		
Price of wheat ranging from 50s. 10d. to 69s. 9d.	1845	33,686,054
	1847	32,904,127
	Decrease	781,927

Prices Falling.

<i>Three Years—1825 to 1827.</i>		
Price of wheat ranging from 66s. 6d. to 56s. 9d.	1825	37,322,612
	1827	35,726,591
	Decrease	1,596,021*
<i>Five Years—1831 to 1835.</i>		
Price of wheat ranging from 66s. 4d. to 39s. 4d.	1831	32,477,076
	1835	33,607,558
	Increase	1,130,482
<i>Five Years—1839 to 1843.</i>		
Price of wheat ranging from 70s. 8d. to 50s. 1d.	1839	34,423,186
	1843	33,286,471
	Decrease	1,136,715*
<i>Five Years—1847 to 1851.</i>		
Price of wheat ranging from 69s. 9d. to 38s. 5d.	1847	32,904,127
	1851	34,766,982
	Increase	1,862,855

The answer returned by this table to the question—what relation has the price of wheat to the revenue derived from customs and excise duties?—is just as uncertain as the answer returned to the analogous question—what relation has the price of wheat to the net ordinary revenue?—by the figures in Table XV. of the Essay so often referred to. In both cases, the results in conformity with the popular theory are counteracted by precisely the same number of results at variance with it. The only difference is, that, in the case of rising prices, the cycles of years which yield results opposed to the popular view are the same both for the net ordinary revenue and for the revenue derived from customs and excise; while in the case of falling prices, the cycles present two correspondences and two variances. This difference is shown in Table XI.

TABLE XI.

	Ordinary Revenue.	Customs and Excise.
<i>Rising Prices.</i>		
Four years —1822 to 1825	Decrease	Decrease
Three years—1827 to 1829	Increase	Increase
Five years —1835 to 1839	Increase	Increase
Three years—1845 to 1847	Decrease	Decrease
<i>Falling Prices.</i>		
Three years—1825 to 1827	Decrease	Decrease
Five years —1831 to 1835	Decrease	Increase
Five years —1839 to 1843	Increase	Decrease
Five years —1847 to 1851	Increase	Increase

Such being the results obtained by combining the two elements of the price of wheat and the amount of the revenue from customs and excise duties, as compared with the results arrived at by similarly comparing the price of wheat with the net ordinary revenue, we have next to consider the question before us as influenced by the introduction of another element, namely, the customs and excise duties year by year reduced or repealed, increased or newly imposed. The materials for this new inquiry have been laid up in store in my Essay “On the Immediate and Remote Effect of the Remission of Customs and Excise Duties on the Productiveness of those branches of the Revenue.*” It is only necessary to bring the figures of that Essay into juxtaposition with the prices of wheat.

It will be seen on referring to the Essay just named, that in the history of the revenue from customs and excise during the thirty years from 1822 to 1851 inclusive, there were 16 successful, 7 partially successful, and 7 unsuccessful years; that is to say, there were 16 years in which, in the year after a reduction or repeal of customs’ and excise duties, the revenue from customs and excise was restored, and yielded even a surplus, or in which, in the year after the imposition of fresh taxes or the increase of existing taxes, in the department of the customs and excise, the estimated yield of the new or augmented tax was realized, and a surplus obtained, together with

* *Journal of the Statistical Society*, September, 1853.

7 years in which, under the same circumstances, the revenue was only partially restored, or the estimated increase only partially realized; and, lastly, 7 other years in which, under the same circumstances, the revenue was not only not restored, or the estimated increase realized, but a falling off in the yield of the customs' and excise duties was experienced. The prices of wheat in these three groups of successful, partially successful, and unsuccessful years, are given in the following table:—

TABLE XI.

	Price of Wheat.	
	<i>s.</i>	<i>d.</i>
16 successful years	53	5
7 partially successful years	57	5
7 unsuccessful years	58	10

In this instance, the results of the table correspond more closely with the popular theory than the results of Table IX. in the former Essay. The successful years in the history of customs' and excise taxation coincide with the lowest price of wheat, the unsuccessful with the highest, and the partially successful with the intermediate price. It is true that the difference of price, especially between the partially successful and the unsuccessful groups of years, is very small; but the differences were even less in the case of the total net ordinary revenue; while the successful years corresponded to a higher price of wheat than the partially successful ones. The exact figures were:—11 successful financial years, 55*s.* 10*d.*; 7 partially successful financial years, 53*s.* 7*d.*; 11 unsuccessful financial years, 58*s.* 10*d.* This, then, is the solitary instance, so far as this inquiry has hitherto proceeded, in which the revenue from customs and excise has shown a closer conformity to the popular theory than the total net ordinary revenue.

In the Essay on the "Relation of the Price of Wheat to the Revenue," a table (Table II.) was given, in which the thirty years embraced in the inquiry were arranged in quinquennial and decennial periods, and in periods of fifteen and thirty years, which periods were distinguished as periods of gain or loss, according as the financial operations of the country had proved successful or unsuccessful, taking into account every increase or remission of taxation, and the yield of the revenue in the first and last year of the series, compared with the calculated amount which the revenue would have attained through mere increase of population, on the supposition that taxation had remained unchanged, and that the revenue had sustained no injury from that unaltered state of things. The calculations necessary for extending this inquiry to the revenue from customs and excise will be found at Table VI. of the Essay "On the Immediate and Remote Effect of the Remission of Customs' and Excise Duties on the Productiveness of those branches of the Revenue." In order to produce a table corresponding with Table I. of the previous Essay, it is only necessary to add the element of the price of wheat, as in the following table:—

TABLE XII.

<i>Periods of Five Years.</i>	Gain or Loss to the Nation.	Average Price of Wheat.	
	£	s.	d.
1822 to 1826	5,593,000 gain	56	1
1827 „ 1831	1,689,861 loss	62	10
1832 „ 1836	4,496,825 gain	49	1
1837 „ 1841	2,519,967 loss	64	4
1842 „ 1846	6,646,600 gain	52	10
1847 „ 1851	3,023,692 gain	48	8
<i>Periods of Ten Years.</i>			
1822 to 1831	3,662,466 gain	59	5
1832 „ 1841	1,069,399 loss	56	9
1842 „ 1851	7,945,100 gain	50	9
<i>Periods of Fifteen Years.</i>			
1822 to 1836	7,458,152 gain	56	0
1837 „ 1851	3,440,368 gain	55	3
<i>Period of Thirty Years.</i>			
1822 to 1851	5,749,298 gain	55	

The results of this table are in kind, though not in amount, the same as the results already obtained in the Essay on the “Relation of the Price of Wheat to the Revenue.” The periods of gain and the periods of loss are the same both for the net ordinary revenue and for the revenue from customs and excise. In both cases, too, the unsuccessful financial quinquennial periods are periods of high prices, and the successful financial periods, of comparatively low prices. The prices of wheat, however, do not by any means correspond, either for successful or for unsuccessful quinquennial periods, with the degree of success or failure. This will be more clearly seen, if the facts contained in the foregoing table are arranged in such a manner as to separate the successful from the unsuccessful financial periods, at the same time that the periods are placed in the order of the degree of success or failure, as was done in Table II. of the Essay on the “Relation of the Price of Wheat to the Revenue.”

TABLE XIII.

Successful Financial Periods.	Price of Wheat.		Unsuccessful Financial Periods.	Price of Wheat.	
	s.	d.		s.	d.
1842 to 1846	52	10	1837 to 1841	64	4
1822 „ 1826	56	1	1827 „ 1831	62	10
1832 „ 1836	49	1	.....	....
1847 „ 1851	48	8	.....	....
1842 „ 1851	50	9	1832 „ 1841	56	9
1822 „ 1831	59	5	.....	....
1822 „ 1836	56	0	.....	....
1837 „ 1851	55	3	.....	....

With one unimportant exception (the inversion of the order of two unsuccessful financial periods), this table coincides so closely with Table II. of the former Essay, that the observations which apply to the one apply almost equally to the other. In the case of the customs and excise, as of the net ordinary revenue, the unsuccessful quinquennial periods are periods of higher price than any of the successful financial periods of the same duration. But neither in the quinquennial periods nor in the longer periods of fifteen years, does the price of wheat vary as the degree of the success attending our financial operations; for the two most successful financial periods of five years each, are periods of higher price than the two least successful periods of the same duration; while the most successful of the two periods of fifteen years corresponds to a somewhat higher price than the least successful period of the same length.

Having followed so closely throughout this communication the order of inquiry observed in the Essay on the "Relation of the Price of Wheat to the Revenue," I cannot do better than maintain my consistency to the end, by appending the following summary of the results to which the present inquiry has conducted me. The first proposition will be found to be almost word for word the same as the first proposition in the former Essay:—

1. The influence of the price of wheat on the revenue derived from customs' and excise duties is not such as to establish a very close and uniform relation between the one and the other; for equal prices of wheat do not coincide with equal amounts of revenue, nor equal amounts of revenue with equal prices of wheat; while cycles of years of rising and falling prices are found to correspond with diminishing and increasing amounts of revenue indifferently; and even those numerical results which seem to indicate the closest relation between the price of wheat and the yield of customs and excise duties, display exceptions and irregularities which tend to impair the evidence they afford.

2. The influence of the price of wheat on the revenue from customs and excise is much less considerable than the influence of the price of wheat on the net ordinary revenue of which the customs' and excise duties constitute so considerable a part; for while, in five out of six instances, the net ordinary revenue in groups of years of low prices exceeded the net ordinary revenue in similar groups of years of high prices, in no less than four out of the same six instances the yield of the customs and excise duties was higher in the groups of dear years than in the corresponding groups of cheap years. Again, when the years following high and low prices are substituted for the years in which those prices respectively occur, and groups of years following dear years are compared with groups of years following cheap years, though there is uniformly an excess in groups of cheap years over groups of dear years, that excess is always proportionably much less in the case of the customs' and excise duties than in the case of the net ordinary revenue; and other numerical comparisons lead to similar results.

3. When the amount of the revenue derived from customs and excise duties in different years is subjected to the necessary correction of taxes imposed or remitted, and the years of successful and

unsuccessful financial operations are compared with the price of wheat, the results are found to be more in harmony with those obtained in the case of the net ordinary revenue, though the irregularities are such as to confirm the principle just laid down in the first proposition, that there is no close or uniform relation between the price of wheat and the revenue from customs and excise.

4. If the relation proved to exist between the price of wheat and the revenue from customs and excise in the year following may be safely assumed to be the true relation, then the measure of that relation would be, in round numbers, 1,811*l.* to 24,053*l.* of customs and excise duties for every rise or fall of one shilling in the price of wheat, the relation between the price of wheat and the net ordinary revenue in the year following being measured by the much more considerable amount of from 42,746*l.* to 114,943*l.*

In the Essay on the "Relation of the Price of Wheat to the Revenue," I took occasion to make some observations on the light thrown by that inquiry on the real difficulties and alleged fallacies of statistics. Those observations apply with equal force to the results of the present communication. It is true of the revenue derived from customs and excise duties, as it is of the net ordinary revenue of which it forms a part, that the one result—the yield of the revenue year by year—is brought about by a vast variety of distinct agencies acting with ever-varying intensity, and in constantly shifting combinations, so that it is most difficult and even impossible to obtain, in respect of any one agency, that separation and isolation which is essential to an estimate of its exact force and value. Again, the yield of customs and excise duties, like the amount of the net ordinary revenue, is subject to great disturbance, not merely from causes beyond the control of statesmen, but from fiscal reforms and revolutions of very frequent occurrence. The natural prices of wheat and of flour, for instance, have been, as already observed, disturbed by no less than seven distinct Acts of Parliament in thirty years; and other articles of prime necessity and general consumption have been subject to the same disturbing cause.

These observations apply rather to the difficulties than to the fallacies which beset the path of statistical research. The results of the present inquiry are at least equally instructive with those of the Essay so often referred to as to the true nature of some alleged statistical fallacies. In the case of the customs and excise duties as of the ordinary revenue, the curious and unexpected results obtained by comparing the price of wheat with the yield of the revenue in cycles of years of rising and falling prices, throw light upon one of the most common of statistical fallacies. By comparing the prices of wheat during every cycle of either class with the revenue in the first and last years embraced in the cycles, that uncertain response which, coinciding with the conflicting results of other comparisons, represents the whole truth, would have been converted into a response in favour of or against the prevalent opinion by the accidental or intentional selection of certain cycles to the exclusion of the rest. If such a selection was made in good faith, error would have honestly crept in—if in bad faith, the proverb "that anything may be proved by figures," would have received an apt illustration.

But the results arrived at in the present communication are suggestive of other reflections not less instructive in a statistical point of view. There is reason to believe that the great majority of statisticians shared the opinion of the late Mr. Porter, that the price of wheat has so constant and close a relation to the revenue as to be at all times the chief cause of the fluctuations to which the revenue is subject. The Essay on the "Relation of the Price of Wheat to the Revenue," while it showed that that opinion was not tenable, at least in the decided and dogmatic form in which it has been so often expressed, did not merely modify the strength of this preconception, but suggested to many persons a ready explanation of the result so unexpectedly obtained. It was alleged that though the price of wheat might not exercise that decided influence on the yield of the entire revenue which had been attributed to it, the prevalent opinion would be fully borne out if the inquiry were limited to those branches of the revenue which are dependent on the consumption of articles of prime necessity, and of luxuries in great demand among the mass of the population—in other words, the articles charged with customs and excise duties. There can be no doubt that this modified opinion was at least as strongly entertained as the more comprehensive dogma which it had served to replace; nor is it to be denied that the opinion which attributes to the price of wheat a great influence on the consumption and yield of articles charged with customs and excise duties is among the most general and most seemingly natural of all the articles of popular belief. Nevertheless, this opinion, general as it is, and reasonable as it seems, is not borne out by facts. It is even less able to bear the test of statistical investigation than the error which it has replaced, for the yield of the customs and excise duties is even less affected by fluctuations in the price of wheat than is the ordinary revenue itself. Does not this fact, then, teach us a useful lesson on the necessity of not taking even the most probable and popular opinions for granted? Does it not give us good grounds for believing that in all the sciences of observation—in medicine, in *hygiène*, in agriculture, in political economy—there are many received opinions which would be entirely changed or greatly modified if submitted to the ordeal of statistical inquiry? In the case of the question now under consideration it is obvious that it is not the statistical method which is to blame for having led to fallacious conclusions; but statisticians whose opinions were entitled to consideration have fallen into error and exaggeration, because, being statisticians, they had not taken the precaution of submitting their opinions to the necessary test of their own method.

This inquiry into the relation of the price of wheat to the revenue will not be complete till it has been made to embrace not merely the effect produced by fluctuations in the price of wheat on the net ordinary revenue, and on that part of it which arises from customs' and excise duties, but also on special articles of consumption subject to those duties, such as tea, sugar, wine, and spirits. As this is one of those questions that ought not to be left subject to any doubt which a little labour properly bestowed can remove, I hope to be able, on some future occasion, to address myself to it.

Old and New Bills of Mortality; Movement of the Population; Deaths and Fatal Diseases in London during the last Fourteen Years. By JOHN ANGUS, ESQ., General Register Office.

[Read before the Statistical Society of London, Monday, 10th April, 1854.]

To the plague the public of London owed their bills of christenings and burials; to the acknowledged value of such records in connexion with the property of individuals, and only in a second degree to the knowledge of their importance in political arithmetic, we are indebted for the present system of registration of births, deaths, and marriages. This is another illustration of a natural law, by which contrivances, to which men are led by fear, love of property, or other powerful impulses of the mind, become fertile in new suggestions, and subserve innumerable uses, which enrich the storehouse of knowledge and dispense incalculable benefit to mankind. If it could be imagined that England should cease among nations, that her institutions should perish and her cities crumble to the dust, and that the records of the births, deaths, and marriages of her people had survived the wreck, with collateral proof of the social purposes to which they had been applied,—these records would furnish evidence, and evidence of a most satisfactory kind, that she had made some progress in civilization. Within the range of philosophical inquiry there is nothing more attractive in its character, or more important in relation to practical medicine, sanitary police, and the economy of wealth, than the laws of vitality, and the influence of age, sex, occupation, condition in life, situation, climate, change of seasons, and institutions, in promoting health or planting the seeds of disease.

The old bills of mortality* for London were commenced in 1592, but in December, 1595, on the cessation of the plague, were discontinued. They were resumed on the 29th of December, 1603, the first year of the reign of King James the First, on the recurrence of the plague, and have been continued since that time to the present without intermission, except during the great fire, when the deaths of two or three weeks were given in one bill. On the 18th of July, 1625, the parish-clerks set up a printing-press in their hall, for which they had obtained a decree under the seal of the High Commission Court; and from that date the number of burials was printed against each parish.

The returns profess to include 97 parishes within the walls, 17 without the walls, 24 out-parishes in Middlesex and Surrey; also Westminster (which was added in 1626.) containing 10 parishes. When a person died, the tolling of a bell, or an order given to the sexton for a grave, announced the event to the searchers,—“old-women-searchers,” as Graunt calls them,—the accuracy of whose

* The invention of “bills of mortality” is not so modern as has been generally supposed, for their proper designation may be found in the language of ancient Rome. Libitina was the goddess of funerals; her officers were the Libitinarii, *our* undertakers; her temple in which all business connected with the last rites was transacted, and in which the account of deaths—*ratio Libitinæ*—was kept, served the purpose of a Register Office.

reports on the cause of death was sometimes damaged by "the mist of a cup of ale or the bribe of a two-groat fee," instead of one groat, which was their usual *honorarium*. Each parish-clerk made his report on Tuesday night; the general account was made up and printed on Wednesday, and was published on Thursday. The price of the bills was 4s. a-year. In the modern bills prepared by the Registrar-General the report of each registrar shows the births and deaths registered by him in the week up to Saturday night; it is transmitted to the central office early on Monday; the return is made up on that day, printed on Tuesday, and published on Wednesday. A day is therefore lost in the preparation, in consequence of the intervention of Sunday. But the Registrar-General (Major Graham) makes no charge for his returns, though he might plead for that course a venerable precedent. He distributes them gratuitously to individuals, learned bodies, and newspapers,—to those who apply for them, who take an interest in them, and are likely to turn them to useful account.

Captain John Graunt, a citizen of London, and F.R.S., who lived in Birch Lane, published his "Natural and Political Observations on the Bills of Mortality," in 1662. He reckoned that there had been 399,910 deaths in thirty-three years (1629-1661), and by a process which he has described, he estimated the population at 403,000* in the last of those years. Hence it would be inferred that the annual rate of mortality did not much exceed 3 per cent., an estimate which may be conjectured to be considerably under the mark for those days of terrible visitation. While the annual deaths were, on an average, 12,119, the births were only 8,201; and this defect of births, as compared with deaths, pervades the bills even in healthy years,—a dispensation of which we, in the present returns, happily witness the reversal. In another place Graunt computes the burials in 40 years (1604-43) to be 363,935, and the christenings 330,747 in 123 parishes, (Westminster and other 6 parishes not being included,) giving for the former an annual excess of only 830. He refers the excess to other causes besides a high rate of mortality. The registered christenings were deficient because (1), theological opinions were entertained by some, unfavourable to the baptismal rite; (2) there were occasionally religious scruples on the part of Christian ministers regarding the worthiness of parents to have their children baptized; and (3) what probably formed the chief difficulty, there was a small fee for registration.

But still more grievous causes of debilitation prevailed, and time, which destroyed the people of London, gradually destroyed also the bills of the "Worshipful Company of Parish Clerks" which recorded the births and deaths of that people. In the lapse of years they have suffered severe dilapidation; the number of their baptisms and burials has dwindled to the smallest proportions. Parishes neglected to make their returns; parish clerks were idle or contumacious, and could not be prevailed on to do their duty. It may be noticed here that a defect had been inherent in the organization from the beginning, arising from the circumstance that it belonged to a church which did not embrace the whole population; for all Roman Catholics

* In another place he calculated the population at 384,000, or about that of the city of Glasgow at present.

escaped enumeration at baptism, and nearly all at death. It is even stated that persons consigned to burial-places under the jurisdiction of the Church, but not of a parochial character, such as those of St. Paul's, Westminster Abbey, Charter House and other Hospitals, the Temple, &c., were not included in the bills. Dissent flourished, and dissenters would have nothing to do with the parish clerk, whose very name was a stench in their nostrils; and their bodies were buried in cemeteries, beyond parochial supervision. The parish of All Saints, Northampton, once enjoyed the privilege of being supplied with elegiac verses for its annual bills by one who was incomparably the best poet of his time. The company of parish clerks of London enjoyed no such advantage. There were citizens of credit in abundance, but none apparently who had a turn for composition; and the bills, destitute of poetry, became almost as miserably deficient in fact. Let the bill for the week ending Tuesday, April 4th, (the current month,) speak for itself. In the 97 parishes within the walls, 17 parishes without the walls, 24 out-parishes in Middlesex and Surrey, 10 parishes in the city and liberties of Westminster, there were actually 18 baptisms and 19 deaths—about 1 baptism and 1 death to 8 parishes. If this return be correct London is favoured among cities in its rate of mortality; but dry-nurses and undertakers demand our sympathy, for manifestly their occupation is gone.

But let it be distinctly understood that we entertain nothing but respect for the old bills of mortality, which served their day and generation, and have contributed to English history much valuable and interesting information.* The new system of registration for England and Wales commenced on July 1st, 1837; and under the Act establishing it, it is necessary that a clergyman, or person who has charge of the funeral ceremony, before committing a body to the grave should be provided with a certificate from the registrar of the sub-district in which the death occurred, or otherwise should give notice to the registrar within seven days. A violation of the Act in this particular is made subject to a penalty. Soon after the Act came into operation the Registrar-General resolved to supply a want which had been much felt,—to issue a series of weekly returns, which would accomplish their object in a manner more satisfactory to the public than the bills of the parish clerks. The first was for the week ending January 11th, 1840, and the series has been continued from that time without interruption. The district of Wandsworth was added in 1844, those of Lewisham and Hampstead in 1847. London, as now constituted, is composed of 36 districts and 135 sub-districts. The return as published, therefore, presents an analysis of the reports

* In the first thirty years of the present century the bills had undergone a visible improvement. In the Annual Bill for 1833, the christenings were 27,090, the burials 26,577. These numbers show the excess on the right side. In the Bill for 1837, occurs the following notice: "By the operation of the New Registration Act much difficulty has occurred in obtaining the reports of christenings and burials; in consequence of which, in some parishes, the reports have been wholly withheld; and in those of several other parishes where the office of searcher has been discontinued, the diseases by which deaths have taken place, have been necessarily omitted." The respectable functionary referred to has left the scene; and the medical man, with his book of blank forms, to be filled up with primary and secondary diseases, and their duration, has taken her place.

of 135 registrars. They are supplied with blank forms, into which they are required, at the close of each week, to copy from their register books the age, sex, and profession of each person whose death they have registered; the place, date, and cause of death; to state any facts relating to the condition of houses, the spread of epidemics, or to give other useful information; and also to report the number of male and female births. "Births" were added to the return in 1815. In 1844, and up to the present time, the returns have been enriched with copious and minute meteorological observations with which the Registrar-General has been favoured by the Astronomer Royal. It is scarcely necessary here to mention that the department of vital statistics, in which the weekly, quarterly, and annual publications are prepared, is under the superintendence of Mr. Farr, whose valuable reports are well known in the world of science, and have lately become particularly interesting to persons conversant in the subject of life insurance. A "Statistical Nosology" was prepared with much pains, and placed in the hands of the medical profession in 1843; and in 1845 instructions to coroners were drawn up, on the registration of causes of violent deaths, drowning, fractures, suicides, murders, &c.,—a class of facts, the investigation of which should yield the most important results; and to these instructions it is therefore desirable in a high degree, that coroners should give the fullest measure of consideration, and carry them out to the utmost extent that in any circumstances is found practicable. The Registrar-General effected, in 1845, an immense improvement in the machinery of registration by distributing books containing blank forms of certificates of fatal diseases to all qualified medical practitioners.

The weekly return, as now published, consists of the following parts:—Remarks on the "Health of London during the Week," presenting the most striking features in the tables, and such interesting and important facts as the registrars may have gleaned in the exercise of their vocation; tables of births and deaths, distinguished according to sex, with the numbers and their averages in corresponding weeks of previous years; a table of fatal diseases, with the numbers referred to them distributed in three periods of life, (under 15 years, 15—60 years, 60 and upwards,) also the number of deaths from each disease in the corresponding weeks of ten previous years; a table of the deaths in districts, in juxtaposition to the deaths in the same districts in ten corresponding weeks; a table of the deaths registered in the week in 47 workhouses, in 9 military and naval asylums and hospitals, in 21 hospitals, in 20 lunatic asylums, in 16 prisons, and in 2 hospitals for foreigners; and, lastly, the table of meteorological observations made at the Royal Observatory, Greenwich.

London is eminently aggressive in its relation to the surrounding country, and it now encircles within its arms an area far exceeding that which John Graunt surveyed when he wrote his *Observations*. The London of the modern bills of mortality, as published by the Registrar-General, and also as the term is used in his *Quarterly and Annual Reports*, embraces an extent of 122 square miles, on which surface are planted (according to the census of 1851,) 305,933 inhabited houses, in some places thick-set, and not least in the Tower "Hamlets,"—in others straggling in almost rural superfluity of space.

The population live in a density varying from 2 persons to an acre in Lewisham to 284 in St. Botolph and Cripplegate, and at an elevation varying from 3 feet below high-water mark in part of Camberwell to 350 above it at Hampstead.

Of all directions in which the metropolis shoots from its centre, the westward seems to have been ever the most approved; and the early manifestation of this tendency is curiously illustrated by Graunt in the following passage: "The general observation which arises from hence is, that the city of London gradually removes westward; and did not the Royal Exchange and London Bridge stay the trade, it would remove much faster, for Leadenhall Street, Bishopsgate, and part of Fenchurch Street have lost their ancient trade; Gracechurch Street, indeed, keeping itself yet entire by reason of its conjunction with, and relation to, London Bridge. Again Canning Street and Watling Street have lost their trade of woollen drapery to Paul's Churchyard, Ludgate Hill, and Fleet Street. The mercery is gone from out of Lombard Street and Cheapside into Paternoster Row and Fleet Street."

Sir William Petty,* to whom the authorship of the "Observations" has been attributed without sufficient reason, published his "Essay in Political Arithmetic" in 1683, in which he presented an estimate of the area, houses, and population of London within the bills of mortality at that time. The area was less than 1,500 acres; he had been credibly informed there were 84,000 tenanted houses, and he reckoned 8 persons to each, (a proportion which entirely agrees with the last census of the whole metropolis); the population would, therefore, be about 670,000. He attempted to confirm this result by another process:

Graunt had estimated the rate of mortality as 1 death per annum out of 32 living, "over and above what dies of the plague." Petty adopted 30 for the right number, by which he multiplied 22,331, the annual deaths in the last two years, and thus obtained the population.

The mean of deaths in the years 1604-5 was		5,135
"	"	1621-2 " 8,527
"	"	1641-2 " 11,883
"	"	1661-2 " 15,148
"	"	1681-2 " 22,331

Now the third of these numbers is about double the first, and the fourth about double the second; the third and fourth are double the first and second, the fifth about double the third, the fourth and fifth about double the second and third, the last three double the first three, and the last quadruple of the first. The series of years running in quadragesimal periods, he made the rather loose assumption that the population increased in the same ratio as the deaths, and thence con-

* Internal evidence is strongly opposed to this supposition, which appears to be countenanced by Mr. Macaulay. Graunt's crabbed, almost ferocious style, is unlike that of the genial and accomplished physician, and the adulation or superstition which led the Captain to refer the exemption of the year 1660 from the plague to the restoration of his royal patron, who procured him admission to the Royal Society, would not have qualified Petty for the praise of his praised contemporary, Pepys, who says that "in discourse he was one of the most rational men he ever heard speak with a tongue." Evelyn, who claims Graunt's work for Petty, is still more profuse in his commendation.

cluded that it doubled itself in 40 years. It is a somewhat remarkable fact that the censuses of 1801-11, and 1841-51, disclose the same rate of increase. When Maitland, who is probably more to be depended on, made his survey in 1738, or 56 years later, he estimated the population at 725,903 persons, who lived in about 96,000 houses, the former number falling exceedingly short of what the true number must have been if Petty's calculation were correct. It appears likely that Sir William both understated the rate of mortality, which may have been nearer 5 per cent., and overstated the rate of the people's growth. The area within the bills differed at the period of Petty's estimate and that of Maitland's only by the addition of St. Mary-le-Strand and the duchy of Lancaster; and the numbers of persons within this area in 1801 were 744,803; in 1811, 854,337; in 1821, 1,010,577; in 1831, 1,179,096; in 1841, 1,351,396; in 1851, 1,583,748.* Allowing a wide margin for erroneous conjecture, and not overlooking the greater repletion of the space within the bills, and the consequent eruption of the inhabitants into the freer ground beyond them, it is still difficult to avoid the conclusion that the power to multiply and replenish, in the eighteenth century, had been much depressed.

The condition of the metropolis is made up now as then of the most heterogeneous elements; it contains the extremes of wealth and penury, and of all degrees between them; different ranks, different races, and the most diversified occupations; wretchedness in the teeming alleys, and comfort in spacious squares and suburban mansions. To analyze this condition, and exhibit its various effects in the life and death of the population, is a work which demands further prosecution; evidently it would involve much detail and immense labour.

For the purpose of a rough comparison the Registrar-General has divided London into five great divisions: the West, North, Central, East, and South Districts. These, with the exception of the South District, stretch along the north bank of the river from Hammer-smith to Bow and Bromley, while the southern portion extends on the opposite bank from Putney and Streatham to Woolwich.

On the ground, as thus described, there lived in 1840 a population of 1,913,344, and in 1853 a population of 2,468,362, having increased in fourteen years by 29 per cent. The metropolis contained 555,018 more persons in the latter year than in the former. Into the population thus increasing there passed, in the 14 years, (1840-53,) 973,196 persons by birth, and 747,313 went out of it in the same time by death. The excess of births is 225,883. Immigrants numbering more than 329,000, or 23,500 *per annum*, must have come from other parts to London in the same period to supplement the increase, ascertained from the census, in so far as the total increase exceeds the natural. But as thousands leave London through other portals than those of the invisible world, a much greater number of arrivals was requisite to compensate for the departures, and produce the increase. The publication of the Census Returns of 1851, when completed, and of those of future years, will throw some light on the infusion of the rural population into London. The emigration office

* See Census of 1851, division I., page 43. Maitland's estimate scarcely differs from the result ascertained by the Census of 1801.

furnishes the number of persons leaving the port of London, but not the number of its resident population who sail to other shores. Some carry their industry to the west; others, impelled by the *sacra fames auri*, seek Australian homes; and probably the number of Londoners who emigrate is as great in proportion as that of the rural population, for though they may not be so well adapted to such pursuits, they are more adventurous, and better provided with the means of locomotion. Mr. Corbyn Morris, who wrote on the bills of mortality a hundred years ago, argued that the improvement of roads in his time tended more to empty London than to fill it; for while persons called to the capital on business conquered all obstacles and dared all dangers, and would obtain their object in all circumstances, those who wished to leave it for quiet and recreation enjoyed improved opportunities of gratifying their desire. The same remark applies to the far greater facilities of our day; outports more accessible to the navigation of both worlds increase in importance, and trades and manufactures find their seats in the country, which at other times would have contributed to the hypertrophy of London.

With reference to sex, it is an established rule, that of children born, the number of males exceeds that of females; and through the series of years 1840-53, the annual registration furnishes no exception to it. On an average, about 1,400 more boys than girls were thrown into the population of London yearly. Taking the whole fourteen years, the proportion was as 104 to 100. It follows that the registers of deaths will discover a similar excess, though this is not perceived to the same extent, because the duration of life is greater in females, and according to the constitution of the population, the number of females exceeds that of males. The mortality of males has always been greater than that of females, and probably more women migrate *into* London, and more men migrate *out* of it. There died annually on an average about 800 more males than females. The proportion in the whole series of years was as 103 to 100. The only year which violates this law of sex is 1849, when cholera raged in the metropolis; though another epidemic year, 1847, when influenza was prevalent, produced numbers of males and females nearly approximating to each other. In 1849, the deaths as obtained from the weekly returns were, of males, 34,632, of females, 34,400; of which exceptional result an explanation will be found in the Registrar-General's Report on Cholera, where it is stated (page 5) that 6,701 males, and 7,436 females, died of cholera. As a general rule, the mortality of females from cholera does not exceed that of males. In London, it was in excess only above 35 years of age; at all ages it was rather less than that of the other sex. But it may be worth while to inquire whether in large towns, such as London and Liverpool, the choleraic poison from house-drains is not more fatal to women, who, being confined within the close precincts of their homes, are more exposed to its influence.

Dividing the series of 14 years (Table A.) into two equal periods, it appears that the births have increased at the rate of 19 per cent.; that the deaths have increased at the rate of 18 per cent.*; whilst the

* Absolute increase, i. e., without reference to increase of population.

increase of population, taking it in the middle of each period, has been 14 per cent. The annual rate of mortality in the last 7 years (as shown by Table D,) was on an average 25 out of 1,000 living; rising so high as 30 in the year of the cholera epidemic, and falling so low as 21 in the year following, the two years presenting the maximum and minimum of the series. Influenza, which preceded cholera, and, towards the end of 1847, swelled the weekly returns to an amount unprecedented in the new registration, raised the mortality of that year to 27 in 1,000. In the seven years ending 1853, there were 44 persons living to 1 who died, in the west districts; the same number is found in the north districts; in the central, there were 40 living to 1 death; in the east, there were 38; and on the south side of the river, only 37. Persons who reside near Regent's Park and many other parts that could be mentioned, judging from their individual experience, probably consider that London is all that could be wished in point of salubrity; and inhabitants of provincial towns who visit the capital occasionally, and can choose their lodging in any part of it, may find themselves positively benefitted by the change; such indeed may have no cause to be dissatisfied with their position, but it is nevertheless true that places of very different character may be in close proximity, and that in the above representation, which shows London *in the mass*, or only in five great divisions, if the unhealthy parts darken the character of the healthy, the best parts do as much relieve the darkness of the worst. It is readily admitted that this metropolis may challenge comparison with continental cities,—with Constantinople, where the annual mortality has been reported at 5·7 per cent.; with Vienna, where it is 4·5 per cent.

The population of London is not the most healthy, and it is not the most unhealthy, in England. It has been shown that the inhabitants of the metropolis die at the rate of 25 out of 1,000 living per annum. London contrasts rather unfavourably with England (including London itself, other large and small town populations, and country districts), in which the rate of mortality was, in 1838-44, 22 out of 1,000. It contrasts much more unfavourably with such parts as Westmoreland and North Wales, where the numbers are 19 and 18; in parts of the latter, dropping so low as 16. But Liverpool and Manchester do their best to keep London in countenance, for, in the former of these towns, the rate of mortality was in the same years 34, and in the latter town 33. In all the three towns, the waste of infantile life is excessive, and loudly calls for perseverance in all plans of cure or alleviation which central and local legislatures or private benevolence can suggest. In London, the destruction of life under 1 year is at the rate of 207 in 1,000; in Liverpool, it is 280; in Manchester, it is 293; whilst in Westmoreland, it is only 119. In London, children under 5 years of age die at the rate of 87 in 1,000; in Liverpool, at the rate of 136; in Manchester, at the rate of 129; in Westmoreland, only 45 die. Nearly twice as many die at that age in London, and three times as many in Liverpool, as in the high and open regions of the north.

The unhealthiness of London, or, as Graunt expresses it, of its smokes, stinks, and close air, has been long known, especially in regard to young persons and to "those bodies which (as he says)

have not been seasoned to it." That morbid habit produced by it, which Sir James Clark has designated *cachexia Londinensis*, drives all who happily possess the means and opportunity, to recruit on the sea-coast or the Highlands, and to live, with their families, as much out of it as business permits, and as far as carriage accommodation enables them to go and come. *Mercator laudat rura*. Mr. Morris, whose lucubrations, a hundred years old, have been referred to, appeals to the country gentlemen, and entreats them to regulate "the policy of London," as their peculiar office, because it concerns them even more than persons resident in town. He calculates that in the 63 years from the year of the revolution to 1750, both included, above 500,000 persons had been drawn from the provinces to fill the gaps in the London population. And what had been the consequence? For many years the want of day-labourers had increased. Farmers complained of the high price of labour and the impossibility of obtaining it in sufficient quantity. The great sources of national wealth had been attacked; the produce of corn, wool, and other raw material, had been diminished; the increased price of provisions had tended to make manufactures expensive and prevent their exportation; to encourage the importation of cheaper from abroad, and to drive from the country that wealth which their more prudent ancestors had bequeathed to them. This apostrophe to country gentlemen "all of the olden time," may be not unprofitably addressed to their modern representatives. They have been persuaded into giving us cheap corn. Let them co-operate now with the burgesses in improving the dwellings of the poor, both in town and country—in pouring into the houses an abundance of water, both cheap and good—in providing efficient drainage; and by these and whatever means are in their power promoting the public health and sweetening the breath of society in England, and they will do much to reduce within bounds that flow of emigrants which threatens even on our side of the Irish channel to become an *exodus*. Thus the marriage of town and country interests will be consummated.

A table (B) accompanies this paper, in which the rise and fall of mortality throughout the fifty-two weeks of the year are shown, and in which the influence of season is also developed in months. The results are derived from the returns of each week in fourteen years, and are therefore very valuable, though it will be proper to bear in mind that the deaths are, on an average, not registered till a few days after they have occurred. Running the eye down the column, it will be seen that the deaths range above 1,100 for the first three weeks; from that period till the second week of April, they fluctuate between 1,100 and 1,000; from this time till the 19th of May, they run at the weekly number of 900 and more; they then drop to 800 and more, till near the end of June; again they run in nines till the end of July; in August, and till the second week of October, they rise to upwards of 1,000, during which time summer cholera is active; again they drop to the nine hundreds till the second week of November, when they mount to 1,000; and throughout December the population are again dying at the rate of 1,100 a-week. The real facts are masked in some degree in the table at certain points, in consequence of coroners' inquests being registered

in undue number at the termination of each quarter; but to meet the error, a correction may be easily applied. The healthiest part of the changing year is that which comprises the end of May and the whole of June, when the mean temperature is 59° ; the unhealthiest months are the first and last of the year, January and December, when the mean daily temperature is 40° , and 38° . Two periods are unhealthy but in different degrees: the first extending over December, January, February, March; the second less unhealthy, embracing August and September. In August the heat of the air is about the same as in July, 61° , the greatest in the year; in September it descends to 56° . Two periods are healthy, also in different degrees: the healthier spreading over April, May, June, July; the other corresponding with October and November, when the temperature is 49° and 44° .

We proceed to pass a few of the more prominent facts in the tables of causes of death rapidly under review. The diseases that flesh is heir to, or acquires by ill-directed industry, are distinguished into seventeen classes, though the term "sudden deaths," which designates one of them, indicates not a cause, but the cause not being sufficiently ascertained, or, at least, not returned, it denotes the accident of time in relation to the effect (Table C). Out of 100 deaths thus classified, and which occurred in the fourteen years 1840-53, 24 are referred to zymotic or epidemic diseases; 5 to dropsy, cancer, and other diseases of uncertain or variable seat; 18 to tubercular diseases; 12 to diseases of the brain and nervous system; 3 to diseases of the organs of circulation; 15 to diseases of the respiratory organs; 6 to diseases of the digestive organs; 1 to diseases of the kidneys, &c.; 1 to childbirth (exclusive of puerperal fever in the last six years) and diseases of the uterus, &c.; 0.7 to rheumatism (exclusive of rheumatic fever in the last six years) and other diseases of the organs of locomotion; 0.1 to diseases of the skin; 0.2 to malformations; 2.4 to debility (consisting, to a great extent, of cases of premature birth); 1.8 to atrophy, the term which apparently has superseded the "planet-struck" of the old bills; 5 to age, or natural decay; 1 placed to "sudden;" and 3 are the result of violence, privation, cold, and intemperance. By far the most fatal, it will be seen, is the epidemic class; and the proportion of deaths in it rising to so high a figure as 24, or nearly a fourth of the whole, is an unfavourable symptom of the health of London.

Dividing the fourteen years into two periods of seven years each, and taking the population at the middle of each period, it appears to have increased 14 per cent. The deaths from zymotic diseases in the first seven years were 64,462, in the last seven years 108,648, showing an increase of 45* per cent, the necessary allowance being made for increase of population. Both influenza and cholera having fallen on the latter period, have been mainly instrumental in producing this formidable result. Diseases of the second class exhibit a decided decrease,—a result, which, with reference to some of them, such as dropsy, hæmorrhage, abscess, is doubtless due to great improvement of late years in the method of returning the causes of death,—

* The table shows 47 per cent., but a deduction must be made for metria and rheumatic fever, which were not classed with zymotic diseases till 1848.

primary and secondary diseases being distinguished in the medical certificates. Tubercular diseases manifest considerable uniformity, for in the first septennial period 66,091 persons died from them; in the last the number was 66,883. They decreased from an annual number of 465 out of 100,000 living, to 410 out of the same number of the living. The class comprehended scrofula, tabes mesenterica, phthisis, and hydrocephalus. The figures, representing a decrease, may be explained more or less by the fact that many persons suffering under these complaints ultimately fell victims to one of the two epidemics. From diseases of the brain and nervous system there died 42,181 in the former septennial period, 43,619 in the latter,—a positive decrease, taking the population of the two periods into account. Diseases of the heart, &c., latterly recognised by auscultation, have risen from 9,366 to 14,394, or more than 30 per cent. Diseases of the organs of respiration rose from 48,854 to 63,862, an increase of 14 per cent. Diseases of the organs of digestion were stationary, or virtually decreased, the respective numbers having been 22,525 and 22,659. The cases in which disease of the kidneys was fatal rose from 2,516 to 4,448, an increase amounting to 50 per cent. Diseases of the skin discovered an extraordinary excess in the latter period, for the deaths in this class were respectively 277 and 688, showing an increase of 100 per cent., taking, as before, population into account. Fatal malformations were also doubled, producing 617 and 1,303 deaths. Deaths in the last class, viz., those caused by intemperance, want, and external injury, increased at the rate of 25 per cent. Deaths from all causes increased 18 per cent., a rate of increase which exceeds that of the population taken, as stated above, at the middle of the two periods, this latter being 14 per cent.

Smallpox was less fatal in the latter septennial period than the former. In the fourteen years it destroyed 12,093 lives in London. In one year (1844,) it killed as many as 1,804; last year (1853,) was less fatal than any other, for the number who died from this foul disease was only 217. The next fourteen years will show how far legislation can control its power if it is not able to effect its expulsion. What remains to be done the above figures show; what medical science *has* done is manifest from the old bills of mortality, in which our ancestors of 1725 and 1757 read that upwards of 3,000 died in those years of this disease out of a population small as compared with the present.

With regard to measles and scarlatina, the mortality of the former diminished; that of the latter increased 25 per cent. in the two periods. The former destroyed upwards of 17,000 persons, the latter upwards of 26,000. Hooping cough destroyed nearly the same number as scarlatina. The deaths from croup decreased; those from diarrhœa rose from nearly 6,000 to nearly 16,000. Dysentery,* the scourge of former days, and which slew, towards the end of the 17th century, more than 3,000 persons in a year, was not fatal even in the cholera year to more than 370. We all know how cholera has afflicted these latter times; in 1849, 14,125 sunk under its stroke. In 1847 influenza carried off 1,253 persons, and was the indirect cause of many deaths. Typhus speaks in a voice of warning, the deaths in the two

* It included "gripping," &c.

periods having been 10,463 and 18,314, showing an increase of [no less than 53 per cent.

Phthisis exhibits a remarkable constancy, never varying throughout the series from 6,000 and 7,000. Scrofula has increased, the number in the first three years being about 100; in 1852 and 1853, being upwards of 400. Cancer has risen from about 500 to double that number. Deaths after childbirth averaged 419 in a year. The births averaged 68,810; hence it follows that parturition, or diseases incidental to it, was fatal in approximate numbers to 6 women out of a thousand in that state. Graunt came to the conclusion that 10 was about the proportion. Furunculoid disease has recently been much more prevalent and fatal. The deaths from carbuncle, which were 5 or 6 in the earlier years, considerably increased in the last seven years, and have suddenly risen to 50 and 70 in the last two.

Graunt rejoiced that in his day "few were starved." Our modern bills reveal thirty and forty in a year, a number much too large for congratulation. This is exclusive of 225 infants who die in a year from want of breast-milk. Graunt excluded the same class, and reckoned that only 2 or 3 in a year died of privation. There can hardly be any question that this flattering picture was not a true one. He describes the beggars as swarming up and down, and most of them healthy and strong, and asks whether it would not be better for the state to keep them "although they earned nothing." He would cure them of their diseases and teach them to work; but he would not send all the beggars of London "to the West country to spin, where they would only spoil the clothier's wool."

Intemperance adds to the number of its victims at least as fast as the population increases. In spite of teetotal societies, and the whole machinery of tracts and lectures in full work, it is to be regretted that the annual victims of excess in spirituous liquors have latterly been so numerous as eighty or ninety. In 1846, 90 persons died from intemperance. In 1853, the number was 88. But this is not a complete statement of the case, for delirium tremens, which is almost invariably the result of intemperance, destroyed in 9 years an average annual number of 142 lives. To these are to be added frequent cases of fatal injury received in a state of inebriety.

The general conclusion at which we arrive is, that while the total mortality of London has increased in the course of the fourteen years 6 per cent., the mortality from zymotics—typhus, scarlatina, &c.—has made more alarming progress; these diseases, if not generated, being much propagated by over-crowding, dirt, and other remediable causes.

We may never arrive at that redundancy of health which Lucian described, when he stated that out of 1,000 deaths, 398 occurred above sixty years of age; but the improvement of the health of London and also of medical diagnosis will be shown, the former by the reduction of the deaths assigned to zymotic diseases, the latter by a decrease of deaths classed under the heads "sudden" and "old age," and by the relative increase of those referred to paralysis, apoplexy, and disease of the heart; these last indicating that inevitable hardening of the arteries and vessels in natural decay by which man sinks into friendly death as into a SLEEP.

Violent Deaths.

The Registrar-General, in his Sixth Annual Report, remarks that "the violent deaths in England appear to be nearly twice as frequent as in the other countries of Europe from which returns have been procured." The Report contains an elaborate analysis of 10,881 deaths in England in the year 1840—by mechanical injury, drowning, hanging, and suffocation by other means, burns and poison, by suicide, murder, manslaughter, accident, &c.—and the persons who suffered such violent deaths are classified according to their professions. The deaths in recent years have not yet been subjected to complete analysis, and at present it can only be stated that the violent deaths in London were in 1848, 1,516; in 1849, 1,395; in 1850, 1,511; in 1851, 1,642; in 1852, 1,756; and in 1853, they were 1,955. The total in the six years was 9,775. Of these 9,775, there were 550 by poison, 1,473 by burns and scalds, 1,339 by hanging and suffocation, 1,848 by drowning, 3,618 by fractures and contusions, 627 by wounds by gunshot and sharp instruments, and 320 by other means undefined.

TABLE A.

Births and Deaths Registered in London in Fourteen Years (1840-53).

Years.	Births.	Deaths.	Excess of Births over Deaths.
1840.....	57,439	47,809	9,630
1841.....	59,097	46,899	12,198
1842.....	62,111	46,805	15,306
1843.....	62,892	50,029	12,863
1844.....	65,186	51,720	13,466
1845.....	66,751	48,919	17,832
1846.....	70,866	50,123	20,743
1847.....	68,331	59,131	9,200
1848.....	71,380	57,771	13,609
1849.....	72,612	68,755	3,857
1850.....	74,564	48,950	25,614
1851.....	78,300	55,488	22,812
1852.....	81,235	54,732	26,503
1853.....	82,432	60,182	22,250
Total	973,196	747,313	225,883

Note.—In this table the year begins January 1st and ends December 31st, and therefore the numbers in it do not *exactly* correspond with those derived from the Weekly Returns, which comprise 52, and, in two instances, 53 weeks.

TABLE B.

LONDON.—Deaths in Weeks and Months; Averages derived from the Weekly Returns of Fourteen Years, 1840-53; with Meteorological Observations made at Greenwich.

Number of Week.	Average Day on which 14 corresponding weeks of 1840-53 ended.	Average Number of Deaths in 14 corresponding weeks of the years 1840-53.	Minimum Number of Deaths in 14 corresponding weeks of the years 1840-53.	Maximum Number of Deaths in 14 corresponding weeks of the years 1840-53.	Average Monthly Deaths in the 14 Years. The Deaths of 4 or 5 weeks are reduced to Deaths of 30 days.	Mean Monthly Temperature of the Air at Greenwich in 13 years, 1841-53.	Mean Monthly Humidity of the Air at Greenwich in 13 years, 1841-53.
1...	Jan. 6	1,187	869	1,510	January		(12 years, 1842-53)
2...	" 13	1,123	929	1,457	(30 days)		0.855
3...	" 20	1,110	916	1,401	4,728	38° 3	
4...	" 27	1,063	835	1,457			
5...	Feb. 3	1,033	780	1,478			
6...	Feb. 10	1,056	813	1,324	February		(12 years, 1842-53)
7...	" 17	1,042	855	1,235	(30 days)		0.872
8...	" 24	1,086	911	1,328	4,550	38° 8	
9...	Mar. 3	1,063	896	1,344			
10...	Mar. 10	1,051	860	1,427	March		(12 years, 1842-53)
11...	" 17	1,068	792	1,436	(30 days)		0.825
12...	" 24	1,053	770	1,412	4,595	41° 8	
13...	" 31	1,119	832	1,418			
14...	April 7	1,031	780	1,748	April		
15...	" 14	964	816	1,340	(30 days)		
16...	" 21	969	809	1,243	4,184	46° 5	0.802
17...	" 28	941	783	1,182			
18...	May 5	912	756	1,089	May		
19...	" 12	909	761	1,159	(30 days)		
20...	" 19	909	734	1,099	3,864	53° 4	0.780
21...	" 26	897	795	1,068			
22...	June 2	881	736	1,123			
23...	June 9	888	786	1,023	June		
24...	" 16	868	750	1,009	(30 days)		
25...	" 23	872	742	955	3,816	59° 3	0.758
26...	" 30	954	751	1,217			
27...	July 7	904	745	1,103	July		
28...	" 14	895	757	1,369	(30 days)		
29...	" 21	950	744	1,741	4,014	61° 8	0.788
30...	" 28	997	749	1,931			
31...	Aug. 4	1,013	759	1,967	August		
32...	" 11	1,033	801	1,909	(30 days)		
33...	" 18	1,038	776	2,230	4,430	61° 1	0.810
34...	" 25	1,032	745	2,456			
35...	Sept. 1	1,052	788	2,796			
36...	Sept. 8	1,082	762	3,183	September		
37...	" 15	1,060	821	2,865	(30 days)		
38...	" 22	996	766	1,981	4,450	56° 8	0.827
39...	" 29	1,015	808	1,611			
40...	Oct. 6	1,005	794	1,290	October		
41...	" 13	930	786	1,075	(30 days)		
42...	" 20	929	771	1,106	4,083	49° 7	0.862
43...	" 27	947	774	1,116			
44...	Nov. 3	974	813	1,144	November		
45...	" 10	983	814	1,165	(30 days)		
46...	" 17	1,004	800	1,230	4,319	44° 3	0.885
47...	" 24	1,000	853	1,207			
48...	Dec. 1	1,078	852	1,677			
49...	Dec. 8	1,147	770	2,454	December		
50...	" 15	1,162	794	2,416	(30 days)		
51...	" 22	1,159	795	1,946	4,945	40° 4	0.889
52...	" 29	1,147	871	1,403			
Mean		1,011	799	1,537	4,332	49° 4	0.832

TABLE C.
Causes of Death in London in Fourteen Years, and the Deaths in Septennial Periods out of 100,000 Living.

Estimated Population in 1843..... 2,030,411. " in 1850..... 2,327,884.							
Causes of Death.	Deaths in 14 Years, in 17 Nosological Classes.	Deaths in 14 Years in each Class out of 100 Specified Causes.	Deaths in 7 Years, 1840-6, in 17 Classes.	Deaths in 7 Years, 1847-53, in 17 Classes.	Out of 100,000 Persons Living, the Deaths in 7 Years (1840-6) in each Class.	Out of 100,000 Persons Living, the Deaths in 7 Years (1847-53) in each Class.	Out of 100,000 Persons Living, the Annual Deaths in 1847-53.
All Causes	739,105	101	333,255	405,850	16,413	17,134	2,491
Specified Causes	734,232	100	330,905	403,327	16,297	17,326	2,475
I. Zymotic Diseases	173,110	24	64,402	108,618	3,175	4,607	667
II. Dropsy, Cancer, and other Diseases of Un- certain or Variable Seat	36,416	5	19,914	16,502	981	709	101
III. Tubercular Diseases	132,974	18	66,091	66,883	3,255	2,873	410
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	85,800	12	42,181	43,619	2,077	1,871	268
V. Diseases of the Heart and Blood Vessels	23,760	3	9,366	14,394	461	618	88
VI. Diseases of the Lungs, and of the other Organs of Respiration	112,716	15	48,854	63,862	2,406	2,743	392
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	45,184	6	22,525	22,659	1,109	973	139
VIII. Diseases of the Kidneys, &c.	6,964	1	2,516	4,418	124	191	27
IX. Childbirth, Diseases of the Uterus, &c.	7,215	1	3,717	3,498	183	150	21
X. Rheumatism, Diseases of the Bones, Joints, &c.	5,328	0.7	2,342	2,986	115	128	18
XI. Diseases of the Skin, Cellular Tissue, &c.	965	0.1	277	688	14	29	4
XII. Malformations	1,920	0.2	617	1,303	30	56	8
XIII. Premature Birth and Debility	17,259	2.4	7,551	9,708	372	417	60
XIV. Atrophy	13,863	1.8	4,231	9,622	1,091	720	59
XV. Age	38,931	5	22,168	16,766	1,091	156	103
XVI. Sudden	8,676	1	4,578	4,098	225	176	25
XVII. Violence, Privation, Cold, and Intemperance	23,138	3	9,515	13,643	469	586	81

TABLE D.
(Published by the Registrar-General.)

London.	Area in Square Miles.	Annual Increase of Population per Cent. 1841-51.	Popula- tion, 1851.	Deaths, 1853.	Annual Mortality per Cent.*						Mean of 7 Years.	Living to 1 Death.
					1847-†	1848.	1849.	1850.	1851.	1852.	1853.	
<i>West Districts.</i> Kensington—Chelsea—St. George, Hanover Square—Westminster—St. Martin-in-the- Fields—St. James	10.9	2.49	376,427	8,937	2.450	2.361	2.613	1.964	2.206	2.144	2.212	44
<i>North Districts.</i> Marylebone—Hampstead—Pancras—Is- lington—Hackney	21.1	2.67	490,396	11,819	2.537	2.338	2.368	1.980	2.208	2.113	2.236	44
<i>Central Districts.</i> St. Giles and St. George — Strand — Hol- born — Clerkenwell — St. Luke — East London — West London — City of Lon- don	2.9	.48	393,256	10,081	2.789	2.533	2.791	2.114	2.415	2.365	2.497	40
<i>East Districts.</i> Shoreditch—Bethnal Green—Whitechapel —St. George-in-the-East—Stepney— Poplar	9.7	1.99	485,622	13,687	2.935	2.867	3.176	2.168	2.429	2.309	2.655	38
<i>South Districts.</i> St. Saviour — St. Olave — Bermondsey — St. George, Southwark — Newington — Lambeth — Wandsworth — Camberwell —Rotherhithe—Greenwich—Lewisham.	71.2	2.08	616,635	16,678	2.771	2.718	3.762	2.192	2.410	2.296	2.512	37
London	121.8	1.97	2,362,236	61,202	2.710	2.583	3.008	2.094	2.340	2.247	2.441	40

* The Annual Mortality in this Table is deduced from the Population of 1841 and 1851, corrected for increase at each year, and the deaths registered in London in each of the several years, correction being made for the difference between 364 and 365.25636 days.

† The Summaries of the Weekly Tables for the Years 1847 and 1853, contain the deaths in 53 weeks; in this calculation a correction has been made for the difference between 365.25636 and 371 days.

TABLE E.

(Published by the Registrar-General.)

Mean Temperature	47-8°	48-7°	49-6°	49-4°	48-6°	47-6°	51-3°	49-1°	50-2°	49-9°	49-3°	49-1°	50-6°	47-7°
	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.
	364 Days.	361 Days.	361 Days.	364 Days.	364 Days.	364 Days.	364 Days.	371 Days.	364 Days.	364 Days.	364 Days.	364 Days.	364 Days.	371 Days.
Causes of Death.														
All Causes	46,281	45,284	45,272	48,574	50,423	48,332	49,089	60,442	57,628	68,432	48,579	55,354	51,213	61,202
Specified Causes	45,803	44,849	44,820	48,160	50,211	48,155	48,907	60,305	57,372	68,126	48,231	54,906	53,804	60,523
I. Zymotic Diseases	8,399	7,909	7,729	10,046	11,189	9,594	9,596	14,039	18,113	28,313	9,875	12,652	12,104	13,552
II. STORADIC DISEASES— Dropsy, Cancer, and Diseases of Uncertain or Variable Seat	3,285	3,085	3,078	2,917	2,871	2,554	2,124	2,307	2,265	2,329	2,270	2,323	2,361	2,587
III. Tubercular Diseases	9,387	9,431	9,282	9,501	9,485	9,226	9,779	9,948	9,207	8,982	8,539	9,823	9,815	10,509
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	6,110	5,821	5,762	5,921	6,350	6,032	6,185	6,604	6,086	6,243	5,965	6,068	6,001	6,672
V. Diseases of the Heart and Blood Vessels	997	993	1,046	1,234	1,594	1,719	1,783	2,123	1,697	1,931	1,965	2,173	2,156	2,349
VI. Diseases of the Lungs, and of the other Organs of Respiration	6,408	6,572	6,573	7,019	7,421	7,612	7,249	11,144	8,066	8,252	7,822	9,312	8,435	10,831
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	3,198	3,166	3,134	3,302	3,099	3,196	3,430	3,578	3,207	3,439	2,955	3,196	3,235	3,349
VIII. Diseases of the Kidneys, &c. ..	244	234	323	314	378	481	542	632	614	585	614	603	657	743
IX. Childbirth, Diseases of the Ute- rus, &c.	473	510	445	527	510	585	667	750	450	466	467	444	473	448
X. Rheumatism, Diseases of the Bones, Joints, &c.	312	251	280	326	331	343	496	550	355	395	411	403	446	426
XI. Diseases of the Skin, Cellular Tissue, &c.	24	18	37	32	25	54	87	95	87	75	87	89	130	125
XII. Malformations	45	36	43	81	87	130	192	195	215	171	176	160	197	189
XIII. Premature Birth	1,105	1,114	1,148	1,032	1,018	979	1,155	1,257	1,139	1,256	1,318	1,555	1,572	1,611
XIV. Atrophy	314	363	457	514	622	744	1,187	1,401	1,278	1,342	1,146	1,314	1,336	1,805
XV. Age	3,471	3,373	3,316	3,541	3,237	2,959	2,241	3,132	2,168	2,239	2,149	2,334	2,315	2,429
XVI. Sudden	735	759	870	668	592	532	422	674	590	714	676	516	431	497
XVII. Violence, Privation, Cold, and Intemperance	1,296	1,214	1,267	1,182	1,369	1,415	1,772	1,816	1,795	1,694	1,796	2,001	2,140	2,401

TABLE F.—*Parishes and Places within the Old and New Bills of Mortality, with their Areas.*

Parishes, &c.	Area in Acres.	Parishes, &c.	Area in Acres.
<i>Within the OLD BILLS, in 1603.</i>			
All the Parishes of the City of London within the Walls (except St. James's, Duke's-place, added in 1626)	421·8	Brought forward	
St. Andrew, Holborn, then including St. George the Martyr }	131	St. Mary, Rotherhithe.....	886
Saffron Hill and other Liberties ..	56	St. Dunstan, Stepney.....	911
St. Bartholomew the Less.....	4	then including	
St. Bride.....	32·5	Christchurch, Spitalfields	74
Whitefriars.....	9	Old Artillery Ground.....	11
St. Botolph, Aldersgate	25	St. George-in-the-East	243
St. Botolph, Aldgate	45	St. Anne, Limehouse	308
East Smithfield Liberty	37	St. Matthew, Bethnal Green....	760
St. Botolph, Bishopsgate.....	40	All Saints, Poplar	1,400
St. Dunstan-in-the-West	11		
Rolls Liberty, &c.	13·5	<i>The following were added, 1726.</i>	22,538
St. George, Southwark	282	St. Mary-le-Strand and Duchy of }	22
St. Saviour, Southwark, then including Christchurch, Surrey }	155	Lancaster, other Parishes, &c. }	
St. Olave, Southwark, then including St. John, Horsleydown }	95	Tower of London, or St. Peter ad Vincula, Old Tower Without }	37
St. Thomas, Southwark	9	Inner and Middle Temple	21
St. Giles, Cripplegate, then including St. Luke, Old-street }	43		
St. Sepulchre (Within and Without) ..	220	Total within the Old Bills..	22,618
The Charterhouse	51		
	10	NEW BILLS.	
<i>The following were added, 1601-6.</i>	1,853·8	<i>In addition to the above, the following are contained in the New Bills, which were commenced Jan. 6th, 1840.</i>	
St. Bartholomew the Great.....	9	St. Luke, Chelsea.....	865
Bridewell Precinct.....	8	Kensington	1,942
Holy Trinity, Minorities	5	St. Marylebone	1,509
St. Clement Danes	43	Paddington	1,277
Clement's Inn and New Inn	1	St. Pancras	2,716
St. Giles-in-the-Fields, then including St. George, Bloomsbury }	123	Hammersmith	2,321
St. James, Clerkenwell	122	Fulham	1,834
St. Katharine by the Tower	380	St. Mary, Stoke Newington	639
St. Leonard, Shoreditch.....	23	St. Mary, Stratford-le-Bow.....	809
St. Mary, Whitechapel, then including St. John, Wapping.. }	646	Bromley St. Leonard.....	619
St. Martin-in-the-Fields, then including St. Paul, Covent Garden	174	Camberwell.....	4,342
	80	St. Paul, Deptford	1,609
St. Anne, Soho.....	305	St. Nicholas	149
St. James, Westminster.....	26	Greenwich	2,013
St. George, Hanover-square	53	Woolwich	1,596
St. Mary Magdalen, Bermondsey ..	164		
St. John the Baptist, Savoy	1,161	<i>The following were added 31 Dec., 1813.</i>	46,858
	688	Clapham	1,233
	11	Battersea (exclusive of Penge)...	2,313
<i>The following were added, 1626.</i>	5,875·8	Wandsworth.....	2,478
St. James's, Duke's-place.....	3·2	Putney	2,176
City of Westminster, St. Margaret ..	657	Tooting Graveney	561
St. John the Evangelist	260	Streatham	2,904
<i>The following were added, 1636.</i>	6,796	<i>The following were added 27 Dec., 1846.</i>	58,553
St. John, Hackney.....	3,290	Hampstead	2,252
St. Mary, Islington	3,127	Charlton, next Woolwich.....	1,312
St. Mary, Lambeth	4,015	Plumstead	3,715
St. Mary, Newington.....	624	Eltham	4,350
		Lee	1,273
Carried forward		Kidbrooke	755
		Lewisham	5,789
		Total within the New Tables } of Mortality	78,029

Population at Six Censuses within the limits of the Bills of Mortality, as constituted at different stages of their progress.

London.	1801.	1811.	1821.	1831.	1841.	1851.
Within the OLD BILLS ..	746,233	856,412	1,011,948	1,180,292	1,353,345	1,585,807
NEW BILLS.						
Within the limits adopted in the four Censuses, 1801-1831	864,035	1,012,126	1,227,590	1,473,859	1,713,158	2,057,355
Within the limits adopted by the Registrar-Gen- eral in 1837-48	928,816	1,098,554	1,328,684	1,594,890	1,872,365	2,264,651
Within the limits adopted by the Registrar-Gen- eral in 1844-6	946,464	1,120,926	1,356,174	1,627,980	1,912,220	2,315,415
Within the New Tables of Mortality in 1847, and as now constituted	958,863	1,138,815	1,378,947	1,654,994	1,948,417	2,362,236

Mr. Hammack, of the Census Office, who kindly supplied the writer of this paper with the above list of parishes and their respective areas, has referred him to the following passage in Cunningham's Handbook of London:—

“London, at the accession of James I., was said to contain little more than 150,000 inhabitants. At the Restoration of Charles II., in 1660, it was calculated by John Graunt, a resident in the city, and Fellow of the Royal Society, that there were about 120,000 families within the walls of London. ‘The trade and very city of London,’ he says, ‘removes westward, and the walled city is but one-fifth of the whole pile.’ Before the Restoration, says Sir Wm. Petty, the people of Paris were more than those of London and Dublin put together, ‘whereas now (1687), the people of London are more than those of Paris and Rome, or of Paris and Rouen.’ Petty’s tables differ occasionally, but the result of his inquiries, and he paid great attention to the subject, seems to have been that in 1682, there were about 670,000 souls in London, within and without the walls; that in 1684 the burials were 23,202, or 446 per week; that in 1687, the entire population was 696,000. But this, I am inclined to think, is a little above the mark, Gregory King fixing the population in 1696, at only 530,000, and the Population Returns of 1801 (113 years afterwards), at only 864,845. The burials in 1707, were 21,600; in 1717, 23,446; and in 1718, 26,523, much the same, it will be seen, as Petty’s estimate in 1684. * * * * The fire of London destroyed a fifth of the houses, or 13,000 out of 65,000. In 1687, it was calculated by Sir W. Petty, that London contained about 87,000 houses.”

In 1631, the lord mayor returned “the number of mouths esteemed to be in the city of London and the liberty” as amounting to 130,268, the result of an enumeration of the several wards.*

* Maitland’s “History of London.”

TABLE G.

Deaths from the Four Great Plagues of the Seventeenth Century, in the Old Bills; and from Cholera, in 1849, in London as now constituted.

Years.	Plague.	All Causes.
1603.....	36,269	42,042
1625.....	35,417	54,265
1636.....	10,400	23,359
1665.....	68,596	97,306
Means ...	37,671	54,243

Year.	Cholera.	All Causes.
1849.....	14,125	68,755

As compared with deaths from all causes, those from plague were 69 per cent., those from cholera 21 per cent.

Nearly as many died from plague in 1665, as from all causes in 1849.

Deaths from Small Pox in the last Fourteen Years, within London, as now constituted.

Years.	Small Pox.	Years.	Small Pox.	Years.	Small Pox.
1840.....	1,235	1845.....	909	1850.....	498
1841.....	1,053	1846.....	257	1851.....	1,066
1842.....	360	1847.....	955	1852.....	1,166
1843.....	438	1848.....	1,617	1853.....	217
1844.....	1,804	1849.....	518		

Mean annual deaths in 14 years (1840-53)..... 864

Mean annual deaths in 14 years (1745-58)..... 1,950

Deaths from Small Pox and Plague in London in the Years 1629-36 and 1647-79.

Years.	Small Pox and Flox.	Plague.	Years.	Small Pox and Flox.	Plague.	Years.	Small Pox and Flox.	Plague.
1629	72	....	1652	1,279	16	1666	38	1,998
1630	40	1,317	1653	139	6	1667	1,196	35
1631	58	274	1654	812	16	1668	1,987	14
1632	531	8	1655	1,294	9	1669	951	3
1633	72	....	1656	823	6	1670	1,465	....
1634	1,354	1	1657	835	4	1671	696	5
1635	293	....	1658	409	14	1672	1,116	5
1636	127	10,400	1659	1,523	36	1673	853	5
			1660	354	14	1674	2,507	3
1647	139	3,597	1661	1,246	20	1675	997	1
1648	400	611	1662	768	12	1676	359	2
1649	1,190	67	1663	411	9	1677	1,678	2
1650	184	15	1664	1,233	6	1678	1,798	5
1651	525	23	1665	655	68,596	1679*	1,967	2

* After 1679, the plague entirely disappeared.

Years.	Small Pox and Flox.	Years.	Small Pox and Flox.	Years.	Small Pox and Flox.
1680.....	689	1707.....	1,078	1733.....	1,370
1681.....	2,982	1708.....	1,687	1734.....	2,688
1682.....	1,408	1709.....	1,024	1735.....	1,594
1683.....	2,096	1710.....	3,138	1736.....	3,014
1684.....	1,560	1711.....	915	1737.....	2,084
1685.....	2,496	1712.....	1,943	1738.....	1,590
1686.....	1,062	1713.....	1,614	1739.....	1,690
1687.....	1,551	1714.....	2,810	1740.....	2,725
1688.....	1,318	1715.....	1,057	1741.....	1,977
1689.....	1,389	1716.....	2,427	1742.....	1,429
1690.....	778	1717.....	2,211	1743.....	2,029
1691.....	1,241	1718.....	1,884	1744.....	1,633
1692.....	1,592	1719.....	3,229	1745.....	1,206
1693.....	1,164	1720.....	1,440	1746.....	3,236
1694.....	1,683	1721.....	2,375	1747.....	1,380
1695.....	784	1722.....	2,167	1748.....	1,789
1696.....	196	1723.....	3,271	1749.....	2,625
1697.....	634	1724.....	1,227	1750.....	1,229
1698.....	1,813	1725.....	3,188	1751.....	998
1699.....	890	1726.....	1,569	1752.....	3,538
1700.....	1,031	1727.....	2,379	1753.....	774
1701.....	1,095	1728.....	2,105	1754.....	2,359
1702.....	311	1729.....	2,849	1755.....	1,983
1703.....	898	1730.....	1,914	1756.....	1,608
1704.....	1,501	1731.....	2,640	1757.....	3,296
1705.....	1,095	1732.....	1,197	1758.....	1,273
1706.....	721				

In his first letter to the Registrar-General, Mr. Farr remarks: "The registration of the causes of death, besides contributing to practical medicine, will give greater precision to the principles of physic. Medicine, like the other natural sciences, is beginning to abandon vague conjecture where facts can be accurately determined by observation; and to substitute numerical expressions for uncertain assertions. The advantages of this change are evident. The prevalence of a disease, for instance, is expressed by the deaths in a given time out of a given number living with as much accuracy as the temperature is indicated by a thermometer; so that when the mean population of the district is known, the rise and decline of epidemics may be traced exactly, and it will then be possible to solve the problem, whether certain tribes of epidemic disorders constantly follow others in one determined series or cycle. Loose phrases are still current, for which numerical formulæ will be substituted. Sydenham, one of the most accurate of medical writers, in speaking of small pox, employed such terms as these:—1661. 'It prevailed a little, but disappeared again.' 1667-9. 'The small pox was more prevalent in town for the first two years of this constitution than I ever remember it to have been.' 1670-2. 'The small pox arose; yielded to the dysentery; returned; &c. &c.' These terms admit of no strict comparison with each other: for it is difficult to say in which year the small pox was most fatal, and impossible to compare Sydenham's experience thus expressed with the experience of other writers in other places and other ages. The 1,987 deaths from small pox in 1668, and the 951 in the year following, express the relative intensity of small pox in distinct terms. The method of the parish clerks, though imperfectly carried out, was the best. * * * * Only a limited number of facts fall under the notice of a single observer. His opinions, when they are the results of his own experience, are stated in general terms, and are often adopted by others in entirely different circumstances. Notwithstanding the constancy of nature, this leads to serious practical errors. Hippocrates wrote his immortal works in Asia Minor and Greece in a particular climate, stage of culture, and civilization; yet all his precepts were taken for the guide of his successors in England, France, and Ger-

many. The therapeutic doctrines of Sydenham, who lived in Pall Mall, and practised principally in Westminster, spread through Europe. The celebrated Broussais' theory of irritation and *gastro-enterite* originated in the French camps. The physicians of this country, when the causes of death are universally recorded, and recorded accurately, will be saved from the fallacies of partial generalization, and, with the results of the registry before them, will be enabled to obtain extended views of the nature, courses, and modifications of diseases."—Registrar-General's First Report, pp. 87, 88.

H.

The following is a specimen of the Medical Certificate of Cause of Death, from the book of blank forms supplied to every qualified medical practitioner; it is forwarded to the Registrar of the sub-district in which the undermentioned death took place:—

CERTIFICATE OF CAUSE OF DEATH. I hereby certify that I attended _____ aged _____
_____ last Birthday; that I last saw h_____ on _____
that _____ he died on _____ at _____
and that the cause of h_____ death was _____

	Cause of Death.	Duration of Diseases.
(a) First	Scarlatina.....	8 days
(b) Second	Meningitis	48 hours

Signed John Brown,

Prof^l. Title M.R.C.S.,

Address 52, Guilford Street,

Russell Square.

Exclusive of the deaths on which inquests are held, and which are therefore returned to the registrar by coroners, the following weekly numbers, registered at various times, will show the average proportion of cases in which the disease is ascertained by the medical attendant, and attested by him:—

	Week ending March 30, 1850.	Week ending Oct. 1, 1851.	Week ending Jan. 3, 1852.	Week ending June 6, 1852.	Mean Pro- portion out of 100 cases.
The causes of death were—					
Certified by written statements of qualified practitioners.....	946	858	1,050	851	96·1
Not certified, because deceased persons had no medical at- tendance	13	11	18	21	1·6
Not certified (or only reported orally or by a non-medical informant)	23	21	34	11	2·3
Total	982	890	1,102	883	100·0

Hence it appears that the cause of death is properly authenticated in 96 out of 100 cases.

TABLE I.

WORKHOUSES, HOSPITALS, PRISONS, &c.

(From the Registrar-General's Weekly Reports, 1850, No. 26.)

The public institutions of London contained 40,783 inmates in the quarter ending March 31st, 1850, namely, 23,972 in workhouses, 3,579 in military and naval asylums, 2,847 in hospitals for the treatment of common diseases, 169 in hospitals for special diseases, 50 in lying-in hospitals, 670 in military and naval hospitals, 3,849 in lunatic asylums, 216 in hospitals and asylums for foreigners, and 5,435 in prisons. Of 10,000 inhabitants 108 were in workhouses, 14 in hospitals, 17 in lunatic asylums, 24 in prisons, 183 in some institution or another. Of the total deaths in the quarter 18 per cent. occurred in public institutions. If the proportion should continue the same, it will follow that 1 in 5 or 6 of the inhabitants who die in London will end their days in a public institution, 1 in 10 in a workhouse, 1 in 21 in a hospital, 1 in 102 in a lunatic asylum. The mortality in public institutions was 23 per cent. on the average number of inmates.

Persons Dying and Discharged; Term of Residence; Population; Rates of Mortality in 1851. Deaths in 1851 and 1853.

(From the Registrar-General's Weekly Reports.)

Public Institutions.	1851.						1853.
	Persons Dead and Relieved, or for other reason Discharged.	Average Term of Residence.	Average Number of Inmates.	Deaths in 1851.	Deaths to 100 cases.	Deaths to 100 Beds assumed to be continually occupied.	Deaths in 1853.
Workhouses	52,441	Days. 149	21,435	4,919	9.38	22.95	5,955
General hospitals.....	29,857*	34	2,762	2,266	7.59	82.04	2,675
Hospitals for special diseases.....	2,212	42	254	254	11.48	100.00	281
Lying-in hospitals	817	25	57	7	.86	12.28	35†
Lunatic asylums	2,233‡	Years. 1.68	3,748	394	17.64	10.51	460
Military and naval hospitals.....	9,495	Days. 22	584	228	2.40	35.04	263
Hospitals and asylums for foreigners.....	556	46	70	31	5.58	44.29	59
Prisons	40,636	53	5,857	70	.17	1.20	106
Total	138,247	92	34,767	8,169§	5.91	23.50	9,774§

* In 1851, eleven general hospitals had 2,762 patients constantly resident, and 2,266 patients died; the mortality was, therefore, more than 82 per cent. The patients remained, on an average, 34 days in the hospitals; 29,857 passed through the wards, and the mortality out of the whole number of sick was 7.59 in the 34 days. About 92 in 100 who entered the hospitals left them alive.

† Including 22 children who died in lying-in hospitals.

‡ The average number of lunatics in twenty asylums was 3,748; the deaths in the year 1851 were 394; the annual rate of mortality was, therefore, 10.51 per cent. But the patients remained, on an average, 1.68 years in these asylums, and only 2,233 died or were discharged; consequently 17.64 in 100 cases terminated fatally, and of 100 persons who entered, 82.36 left the asylums alive.

§ In 1851 and 1853, of all persons who died in London about a sixth part closed their career in public institutions. The same proportion as in 1850.

TABLE K.

Average Numbers of Deaths in London, at Three Periods of Life, in each Week of the Year; derived from the Returns of Ten Years, 1843-52.

Number of Week	Average Date at which the Week ended.	From Birth to 15 Years.	15 Years to 60 Years.	60 Years and upwards.	Number of Week.	Average Date at which the Week ended.	From Birth to 15 Years.	15 Years to 60 Years.	60 Years and upwards.
1	Jan. 5	541	398	277	14	April 6	456	341	224
2	Jan. 12	499	371	273	15	April 13	433	325	201
3	Jan. 19	486	377	270	16	April 20	427	334	206
4	Jan. 26	480	358	243	17	April 27	422	320	197
5	Feb. 2	462	352	249	18	May 4	407	333	187
6	Feb. 9	468	349	238	19	May 11	415	317	182
7	Feb. 16	450	358	238	20	May 18	425	324	183
8	Feb. 23	463	374	258	21	May 25	413	307	178
9	Mar. 2	461	348	240	22	June 1	405	304	178
10	Mar. 9	459	344	240	23	June 8	407	314	170
11	Mar. 16	464	370	245	24	June 15	403	313	168
12	Mar. 23	468	362	262	25	June 22	414	310	170
13	Mar. 30	508	401	254	26	June 29	438	351	183

Number of Week.	Average Date at which the Week ended.	From Birth to 15 Years.	15 Years to 60 Years.	60 Years and upwards.	Number of Week.	Average Date at which the Week ended.	From Birth to 15 Years.	15 Years to 60 Years.	60 Years and upwards.
27	July 6	430	329	162	40	Oct. 5	508	336	193
28	July 13	452	299	163	41	Oct. 12	467	306	177
29	July 20	496	334	172	42	Oct. 19	456	312	176
30	July 27	536	334	177	43	Oct. 26	466	313	174
31	Aug. 3	554	333	179	44	Nov. 2	478	311	182
32	Aug. 10	570	341	179	45	Nov. 9	491	316	189
33	Aug. 17	551	352	189	46	Nov. 16	490	331	202
34	Aug. 24	532	368	192	47	Nov. 23	491	327	203
35	Aug. 31	538	391	193	48	Nov. 30	514	355	223
36	Sept. 7	541	407	203	49	Dec. 7	548	373	278
37	Sept. 14	530	402	193	50	Dec. 14	550	382	281
38	Sept. 21	506	359	185	51	Dec. 21	560	367	279
39	Sept. 28	509	357	191	52	Dec. 28	500	372	215

Of 100 persons who died in London, 46 had not completed their 15th year; 33 were 15 years of age, but had not completed their 60th year; 20 were 60 years of age and upwards. In the above table, the unhealthiness of the hot season is exaggerated by the cholera of 1849, during the months, principally August and September, in which it prevailed; but it is sufficiently clear that the mortality of the young in summer reaches its maximum before the middle of August.

Increase of Epidemics.

In the presence of great and undeniable improvements which the men of the present century have witnessed—the opening of new streets and parks, the supply of better house accommodation for the middle classes, the erection of churches and magnificent public and private buildings, constitutional reforms, better food, better education,

and better amusements, with all the symbols of an increase and wider diffusion of national wealth, and of an improved tone of public morals, it is both difficult and disagreeable to admit that the public health has undergone deterioration, a fact which, nevertheless, the foregoing remarks appear to have established. It may be, therefore, useful to quote the words of writers who speak with authority on this subject. In the Registrar-General's Report on Cholera, the following passage occurs (pp. iii., iv.):—"After the Revolution, the great plagues ceased, but the mortality was kept up by typhus, small pox, influenza, and other zymotic diseases. The writings of Mead, Pringle, Lind, Blane, Jackson, Price, and Priestley, the sanatory improvements in the navy, the army, and the prisons, as well as the discovery of vaccination, by Jenner, all conduced to the diffusion of sound doctrines of public health, and had a practical effect, which, with the improved condition of the poorer classes, led to a greatly reduced mortality in the present century. Since 1816, the returns indicate a retrograde movement. The mortality has apparently increased. Influenza has been several times epidemic, and the Asiatic cholera reached England, and cut off several thousands of the inhabitants, in 1832. It reappeared and prevailed again, as we have seen, with no mitigated violence, in 1849." In the first Report of the Metropolitan Sanatory Commissioners (19th Nov., 1847), it is stated that "though cases of fever were always present in certain localities in the Metropolis, yet several years commonly intervened between one epidemic season or year and another; but fever assuming a severer character, and spreading more extensively than usual in 1838, fever has prevailed as an epidemic ever since. The admissions into the London Fever Hospital since April have exceeded by several hundreds those of any corresponding period. The steadily-increasing prevalence of fever in the metropolis is further shown by the Registrar-General's return of the weekly deaths from typhus during the last three years. The weekly deaths from typhus in 1846 very generally and greatly preponderated over those in 1845, being in several weeks nearly double, and in some few more than double; the deaths in 1847 were still more in excess of those of 1846, being in numerous instances considerably more than double the number in the corresponding weeks of 1846, and in one instance more than treble; and generally from the month of August of the present year (1847), the mortality has been considerably greater than at any previous period since the commencement of the registration. It is clear, therefore, that whatever may have been their intensity in former years, the causes of epidemic disease continue to operate in the metropolis with unabated and even with increased force at the present time. * * *

The dreadful extent to which entire classes of the population who have abundance of wholesome food, but who habitually live in impure air, suffer from certain epidemics, as, for example, artizans and the lower class of shopkeepers, from the very pestilence in question, affords a demonstration that the habitual respiration of impure air is an incomparably more powerful predisponent to epidemic disease than that which has been commonly assumed as the main cause, namely, absolute poverty." The following numbers bring the deaths from typhus down to the latest period:—

Years.	Deaths.	Years.	Deaths.
1840.....	1,262	1847.....	3,184
1841.....	1,151	1848.....	3,569
1842.....	1,174	1849.....	2,479
1843.....	2,083	1850.....	1,923
1844.....	1,696	1851.....	2,346
1845.....	1,301	1852.....	2,164
1846.....	1,796	1853.....	2,649

Dr. Stark, in his Inquiry into the Sanatory State of Edinburgh (1847), writes as follows:—"From 1780 to 1789, 1 person died annually out of every 34 living; from 1790 to 1799, 1 died annually out of every 36 living; so that, in proportion as Edinburgh was better supplied with water, and spread into the newer parts of the town, the health of the city improved. From 1800 to 1809, there died annually only 1 out of every 39 inhabitants; and from 1810 to 1819, only one out of every 40 living. Thus it is seen that in proportion as the town improvements went on, the mortality of the inhabitants diminished. The next decennial period, from 1820 to 1829, shows, however, a retrograde movement, the mortality increasing to 1 out of every 38 inhabitants annually; and being still greater during the consecutive decennial period 1830 to 1839, during which period 1 died annually out of every 34 living. During the current decennial period, there has been 1 death out of every 36 living, showing that since 1820 causes of mortality have been at work which were not then in existence, and are if anything on the increase." This deterioration, the date of which, it will be observed, very nearly corresponds with that assigned in the Registrar-General's Report for a similar change in the health of England, Dr. Stark attributes principally to a worse moral and physical condition of the lower classes, arising from the immigration of Irish into Edinburgh, who began to pour in greater numbers into that city in 1818, and, at the time he wrote, constituted nine-tenths of its paupers.

We return to Captain John Graunt, whose name has been more than once mentioned in the course of this paper, and who says, in his own quaint fashion, that "back-startings seem to be universal in all things; for we do not only see in the progressive motion of the wheels of watches, and in the rowing of boats, that there is a little starting or jerking backwards between every step forwards, but also there appears the like in the motion of the moon, which, in the long telescopes at Gresham College, one may sensibly discern." To this remark it can only be added, that if this be a law of progress in the life of a nation, we must, however reluctantly, submit to it as a necessity; but, at the same time, it will be wise to provide, by all means in our power, that progress be not superseded by a retrogression, to which "forward-startings" will be only the exceptions.

A Statistical and Historical View of the Statute Law of the Realm, and of the number of Statutes passed in each Reign from the earliest recorded period to the present time. By WILLIAM TAYLER, Esq., of the Middle Temple.

[Read before the Statistical Society, 15th May, 1854.]

IN the present age, and more prominently at the present time, when the current of legislation tends so much to the improvement of our social system, by judicious and temperate reforms in all branches of our civil polity, it may be not only interesting to the jurist who has passed a portion of his life in the study of the black-letter learning of the middle ages, and to the statist, whose useful and valuable objects are beginning, through the medium of this Society, to be appreciated, but also to the public generally, to be informed of the gradual progression of the statutes of the kingdom, which have increased from a comparatively insignificant number, in the earlier reigns, to the enormous bulk to which they have now attained, of upwards of 34 quarto volumes.

In discussing a subject so large and extensive, I would take leave, as a preliminary, to notice that it would not be possible, nor is it intended in this essay, to assume a fractional precision; but the subject will be treated with sufficient minuteness to enable the reader to arrive at a just estimate of the past and present condition of the statutes, to bring some sort of order out of the chaos which exists, and to add one more link to the chain of hope, that in this enlightened age some statesman may arise, able and willing, to simplify and rescue the statute book from its present confusion.

In order to carry out the purpose of this paper, I would briefly draw your attention, historically, to the fact, that the study of the statutes gives a practical history of the times for which they were made, and shows the gradual progression from a comparatively rude and barbarous age to the high refinement and civilization in which, by the cultivation of the arts and sciences, and the noble inventions of the last and present century, we now find ourselves.

The earlier statutes, up to about the time of Edward I., were inscribed in Latin, not of a classical character, but of the most barbarous kind; then mostly in Norman French, till about the time of Richard III.; and from thence, to the present time, in the English language.

The laws created by the statutes of those earlier times, were extremely defective, and the courts of justice were in many instances overawed by the crown, or corrupted by the influence of the nobles; and great injustice and inconvenience must have arisen from such an imperfect system to the commonalty of the realm, where power often took the place of right; and, under governments where military strength and feudal tenures occasioned the community to submit with reluctance to the obligations of civil institutions which abridged their privileges.

It has been observed by a learned author, that, in early times, former laws were considered no longer in force than as they were preserved in the last publication; and, by this means, it is said, the

laws were kept within narrower bounds, until they were greatly enlarged, both in number and artificial construction, in modern times; but however this may be, it must be admitted that the earlier statutes had the great merit of brevity, and shine out in strong contrast with the overpowering prolixity of those of the present day.

The conciseness, nevertheless, of the earlier statutes is not perhaps attributable entirely to the causes above spoken of, but to the then low state of trade and commerce, and the absence of wealth, which has since flowed in with the increasing prosperity of England; and it has been reserved to the last half of the past century and the first half of the present, when the industry, manufactures, commerce, and wealth of the country has increased in a ratio unexampled in the history of the world, to increase our statutes five hundred fold, as different interests predominated. But, in framing these statutes, little or no attention has been paid to removing from the statute book many penal, useless, and vexatious laws, with which it is now encumbered, to classifying and rendering the numerous laws applicable to the state, such as the penal, commercial, judicial, financial, and municipal law, simple and understandable, and to removing therefrom every obsolete, expired, or partially-repealed statute, of which there are many hundreds. To this general rule, however, Sir Robert Peel's celebrated consolidation in 1827, forms a noble exception.

Many and various have been the appeals, both in past and present times, to the Parliament, to contract the bulk of the statutes; and even royalty itself, in the person of King James I.,* in the quaint language of the time, thought the Augean stable of the statute code so great a scandal as to call forth his recommendation for a special Parliament. The same proposition was also made by Sir Francis Bacon, lord keeper in Queen Elizabeth's time; and again in an address to the Long Parliament; all which unmistakably proves the anxiety for consolidation then prevailing (even before the statutes had reached one-third of their present bulk), but which, notwithstanding their increasing daily confusion, and the commentary of a learned antiquary of the last century, "that, if done, it might destroy much matter of curious learning," is still devoutly to be desired, and has been left to the industry of modern days to accomplish.

Having thus given a preliminary view of the statute code, we may now proceed to the statistics of the statutes themselves, showing

* King James I., in one of his speeches to Parliament, expresseth himself in the following terms:—"There be in the common law divers contrary reports and precedents; and this corruption doth likewise concern the Statutes and Acts of Parliament, in respect that there are divers cross and cuffling Statutes, and some so penned as they may be taken in divers, yea contrary senses: and therefore would I wish both those Statutes and Reports, as well in the Parliament as Common Law, to be once maturely reviewed and reconciled, and that not only all contrarieties should be scraped out of our books, but even that such Penal Statutes as were made but for the use of the time (from breach whereof no man can be free,) *which do not now agree with the condition of this our time*, ought likewise to be left out of our Books, which, under a tyrannous or avaritious king, could not be endured; and this reformation might, methinks, be made a worthy work, and well deserves a Parliament to be sat of purpose for it."

Lord Coke, in the Preface to his Reports, has also some learned remarks on this speech and the important subject to which it relates.

the number of statutes, public and private, which were passed in each respective reign in the aggregate*, from the time of Henry III., 1225, when the first systematic entry on the statute book takes place, to the 16th and 17th of Her present Majesty, 1853. It must, however, be premised that there are many ancient obsolete and curious statutes, some of which have not been printed, but which, not properly belonging to this investigation, are omitted in the calculations; and that the following enumerated statutes are those exclusively recognized as existing on the statute books edited by Ruffhead and others. I shall also add, *en passant*, by way of illustration, a short account of any special, curious, or interesting statutes, that may have been passed in the reigns of different monarchs.

Among the enactments of the reign of Henry III. is the celebrated Magna Charta, or, as it is always emphatically called, "The Great Charter," from its being the very foundation stone of the liberties of the kingdom, containing thirty-seven chapters; also the Charta Forestæ, or the Charter of the Forest, then a very strict and important subject of legislation, containing sixteen chapters; also the statutes of *Marleberge*, or Marlborough (from their having been enacted there), containing twenty-nine chapters of various important laws; and the sentence of curse given by the bishops against the breakers of the Great Charter. It may also be added as a curious fact, that one of the statutes of this reign contains only twenty-nine lines.

The statutes recorded in the Statute Book in the reign of Henry III., A.D. 1225, (being the 9th year of his long reign of 56 years,) to 1272 are only 15 public statutes.

During the reign of Edward I. many valuable laws were passed, relation being had to the times for which they were made, and which caused the title of the English Justinian to be conferred upon this monarch by the historians and jurists of after times. In addition to the statutes of this time, there are recorded certain other statutes made during the reigns of King Henry III., King Edward I., or King Edward II. It is uncertain when or in which of their times these statutes were enacted, but they are recorded as statutes *Temporibus incertis*, and are in number about 17, independently of those already enumerated.

In the 25 years' reign of Edward I., A.D. 1275 to 1307, 56 public statutes were enacted. In the 20 years' reign of Edward II., A.D. 1307 to 1327, 23 public statutes were enacted.

Among these uncertain statutes, as to time, we find the statute of tournaments; of jewry; of tenants by the curtesy of England; of the great assize of battle; and of the division of pence; every one of which is well worth the perusal of the scholar and the antiquary, as a record of things of the past.

The statutes of the reign of Edward III. are remarkable as showing the dawn of that freedom which, in after times, resulted in such brilliancy; and we find the very first act of the king and parliaments for several years was a confirmation of the Great Charter and the Charter of the Forest. We find also an Act very expressive in its name, "That right be done by Justices to all men;" also for regulating labourers' wages, and what wages labourers and others should take (peculiarly interesting in the present state of this question in Lancashire), and

In the long reign of 50 years of Edward III., A.D. 1327 to 1377, 586 public statutes.

* The statistics of the statutes could have been easily enlarged by giving the number of statutes passed in each year of every reign, but it would have very much increased the essay now submitted to the Society.

that labourers retained depart not within their term; and that pleadings should be in the English tongue, but entered in Latin; as also an Act for confirmation of the liberties of Holy Church.

In the 23 years' reign of Richard II., A.D. 1377 to 1399, 213 public statutes were enacted.

After the usual confirmation of the Charter, there are enactments in this reign (Richard II.) that no spiritual person should be arrested during divine service (a proof that the clergy were then occasionally in debt); an enactment against the raisers of false news and seditious rumours; that sweet wines and claret should not be sold in England after the nativity of Saint John; that accounts *niehil* be put out of the Exchequer; and that the ward of Farrington without should choose an alderman.

In the 13 years' reign of Henry IV., A.D. 1399 to 1413, 142 public statutes.

In the reign of Henry IV. we find a statute passed prohibiting religious persons from purchasing bulls from Rome; that *Welsh* men should not purchase lands in England; and for the abolishing of Galley halfpence—the statute of which, as a matter of curiosity, will be found as a note at foot.*

In the 9 years' reign of Henry V., A.D. 1413 to 1422, 70 public statutes; and in the 39 years' reign of Henry VI., A.D. 1422 to 1461, 200 public statutes.

In the reigns of Henry V. and Henry VI. we find an Act for regulating the weight of nobles, half nobles, and *farthings* of gold; one against the scholars of Oxford hunting by night; one in the latter reign for expelling Irishmen; an Act for the punishment of servants taking unreasonable wages; and against casting of seditious and threatening bills into men's houses; and one for the attainder of Jack Cade.

In the 22 years' reign of Edward IV., A.D. 1461 to 1483, 54 public statutes.

The humblest of subjects, it would seem, were not deemed unworthy of legislation in the reign of Edward IV., for we find an Act touching cordwainers and cobblers in London, or within three miles compass thereof; one "that the passage of pilgrims shall be only at Dover;" and "that four bow staves shall be brought into this realm for every tun of merchandize."

In the 2 years' reign of Richard III., A.D. 1483 to 1485, we find 15 public statutes and 18 private Acts of Parliament, which latter appear for the first time within this reign.

The first private Act of the reign of Richard III. (the fashion of obtaining private Acts henceforth came largely into use) is called *Titulus Regius*, under which title all the reasons and allegations devised to prove the king to be true and undoubted heir to the crown, are set forth at large, and the same allowed, ratified, and enacted by the Lords and Commons, and his brother's children illegitimized."

* Statute 13 Hen. IV., c. 6.

No Gally half pence or foreign money shall be current within this realm.

Item.—Come en lestatut fait lan unszissime nostre Seigneur le Roy goie est ordeigne estoit & establiz qe les Galy halpenies deflors ne courgerent en paiement ne en autre manere demz le Roialme d'Engleterre sur la peine de forfaiture dicell. Et enoutre que les Galy halpenies en qi mains quilz serroient trovez deniz le dit Roialme serroient forseutz au nostrez dit Seigneur le Roy, et auxi qe toutz les estatutz & ordinaances faitz par nostre dia Seigneur le Roy ou par ses nobles progeniteurs sibien de la monoye d'Escoce come de la monoye des autres Roialmes & parties de pardela la nuere serroient tenez & gardez & mys en due execution. Nostre dit Seigneur le Roy considerant la graunde deceit Sibien di les ditz. Galy halpenies come de la monoye des autres Roialmes & parties de par dela la mier voet qe messmes les estatutz soient fermement tenez & gardez & mye en due execution en toutz pointz.

One of the first Acts of the next reign is "a pardon for them who assisted the King in his wars against *Richard*, late *Duke of Gloucester*; Acts of attainder against many noblemen who had taken part in the civil war; an Act for determining what should be the contents of a butt of Malmesey wine, and for the price thereof; and against carrying gold and silver out of the country, which, considering the avaricious character of this prince, may be as well accounted for on personal motives as on those of public policy.

In the 24 years' reign of Henry VII., A.D. 1485 to 1509, 114 public and 194 private statutes were enacted.

The great Acts of the reign of Henry VIII. were those for the dissolution of the monasteries, and spoliation of the religious houses, whose manors, lands, profits, and hereditaments, the king took unto himself. We also find many Acts which had the effect of facilitating to his Highness (as the king was then commonly called)—the power of cutting off queens' heads; sumptuary laws were also passed in this reign, against "excess in apparel;" an Act concerning "the shooting in long bows;" and one that might give much offence in the present military time and use of Minié rifles, against the keeping of hand guns; and one concerning "an outlandish people called Egyptians."

In the 33 years' reign of Henry VIII., A.D. 1509 to 1547, we find a very large increase, there having been passed 412 public and 301 private statutes.

Edward VI.—The Acts of this amiable prince mostly show a tendency towards goodness and mercy, many of them being for the restitution in blood and the restoration of estates to many of noble lineage; but the barbarism of the age must have been great, judging from the then state of the laws, instanced by an Act passed in the first year of this reign, "for the punishing of vagabonds and for the relief of the poor and impotent persons." The preamble recites, "That idle and vagabond persons being unprofitable members, or rather enemies of the Commonwealth, have been suffered to remain and increase, *whom, if they should be punished with death*, whipping, imprisonment, and other corporal pain, it were not without their deserts, for the example of others." Having in this manner declared that these wretched vagabonds deserved death, &c. (though their idleness was probably more the fault of the state than of themselves), the enacting part of this severe statute was doubtless deemed merciful; for it only provides that the offender, there described to be an idle person, shall be taken before a justice of peace, who shall cause him to be marked with a hot iron in the breast (the mark V), and adjudge him to be a *slave* to the person presenting him for two years, to be fed with bread and water, and be put to work (how vile soever it be), by beating, chaining, &c., and if he runs away (as it would seem most natural he should), the justice, on conviction, shall cause such a slave to be marked on the forehead or ball of the cheek with the sign of an S, and shall further adjudge him to be his master's slave *for ever*; and if he again run away, he shall suffer death as a felon. There is likewise a provision in this Act by which they might be sold or bequeathed by will, as any other moveable goods or chattels. By the 39 Eliz., c. 4, they were to be whipped until their bodies were bloody, or to be banished the kingdom, or adjudged perpetually to the *gallies* of the realm. Commentary on such laws, which put even the late vile practice of modern slavery in the colonies to the blush, ever having been allowed by a Christian community

In the 6 years' reign of Edward VI., A.D. 1547 to 1553, 118 public and 49 private statutes were enacted.

to disgrace our statute book, or to remain as a record of such inhumanity, would be superfluous.

In the 5 years' reign of Queen Mary (and Philip and Mary, as it runs in the Statute Book after their marriage,) A. D. 1553 to 1558, there were enacted 82 public and 29 private statutes.

In the Acts of the reign of Queen Mary, which is always considered peculiarly obnoxious to Englishmen, not only from the religion of the queen, but also by reason of her Spanish alliance, we find many wherein the words treason and præmunire prevail, coupled with punishments and cruelties, which history informs us were inflicted upon the people in consequence of them. There is also a special statute for the punishment of heresies, for traitorous words spoken against the queen, and declaring certain offences treasons; which unhappy state of the nation makes it clear, that her majesty of *that age*, had not, as is the case of her majesty of this, the love, respect, and admiration of her subjects.

During the 44 years' reign of Queen Elizabeth, A. D. 1558 to 1603, there were 272 public and 166 private statutes enacted.

Queen Elizabeth.—The first Act of this wise princess is eminently typical of her character, being “an Act for restoring to the Crown the ancient jurisdiction over the State, Ecclesiastical and Spiritual, and abolishing all foreign power, repugnant to the same;” and the second “for the uniformity of Common Prayer and service in the Church, and the administration of the Sacraments.” We are indebted to this reign also for the permanent establishment of poor laws, and for erecting hospitals, or abiding and working houses for the poor, and the assessment of parishes for these objects. These Acts, which have proved of doubtful wisdom, became necessary from the masses of poor thrown upon the public for support by the dissolution of the monasteries and religious houses; for whatever the faults of the system might have been, it must be admitted that they generously distributed to the indigent the large revenues of which the late King Henry VIII. deprived them, without making any other adequate provision in lieu thereof. A very harsh and inhuman Act of this reign also exists for the punishment of that numerous class of persons comprehended by the statute under the name of “Vagabonds*.”

During the 22 years' reign of James I., A. D. 1603 to 1625, there were 134 public and 165 private statutes enacted.

The first Act of the reign of James I. was “for a most joyful and just recognition of the immediate, lawful, and undoubted succession, descent, and right to the Crown.” Acts were also passed for making perpetual the poor law of Elizabeth; for a public thanksgiving every year on the fifth day of November; and for the attainder of divers offenders in the late most barbarous, monstrous, detestable, and damnable treasons (both the latter Acts arising out of the Popish plot); and “an Act for the utter abolition of all memory of hostility between England and Scotland, and the dependences thereof;” a precedent of royal and parliamentary ruling of the national mind, by Act of Parliament, that will be very useful to imitate after the present conflict with Russia is ended.

The Acts during the 24

Charles I.—The Acts of an united legislature under this monarch

* The statute of the 14th of the Queen imposed, that “a vagabond above the age of fourteen years shall be adjudged to be grievously whipped, and burned through the gristle of the right ear with a hot iron of the compass of an inch, unless some credible person will take him into his service for a year,” &c.

may be said to be merely nominal, nearly the whole reign having been a conflict between him and his people, for arbitrary power on the one hand, and freedom on the other. Accordingly the Statute Book is a blank from 1641 until the Restoration; the civil wars and Protectorate having intervened, which ended in the fatal drama that deprived this unfortunate but unconstitutional prince both of his Crown and his life, in 1649. The prominent Acts of this reign are too familiar to need much observation, being, as they are, so well-known and so importantly connected with the history of the country and the liberty of the subject: such were the Acts relating to ship-money, and to tonnage and poundage; and the celebrated petition of right, in the third year of the reign, denying the power of the king to levy arbitrary taxes or loans, as he then unconstitutionally attempted, without the consent of parliament. One of the Acts of this reign, beginning with the high-sounding titles of Charles, King of England, Scotland, France, and Ireland, &c. (as if in mockery of the pride of the man whose days were numbered, and who was soon to die on the scaffold), was for punishing divers abuses committed on the Lord's day, called Sunday, and whereby it is entirely prohibited that there should be any assemblies for unlawful pastimes upon the Lord's day, and that every person so doing should forfeit 3s. 4d. to the poor of the parish. In another statute, on the same subject, a carrier is made amenable to a fine of 20s., that travelled on the Lord's day, and a forfeit of 6s. 8d. upon butchers that should sell or kill victuals on that day. There is also an Act found for what is termed the repeal and continuance of divers statutes, which presents a mass of confusion similar to many of the half repealed or amended Acts of the present day; as must ever be the case where such attempts are made without absolutely repealing and re-enacting the portions of an Act intended to remain part of the law of the land.

years' reign of Charles I., A.D. 1625 to 1649, comprise 51 public and 44 private statutes.

The great hiatus which occurs in the Statute Book from the time of the death of Charles I. till the Restoration, has been found extremely difficult to fill up, the succeeding parliaments of Charles II. having sought to obliterate, by expunging them from the records, every trace both of the memory and the acts of those whom they affected to treat as regicides and rebels. The memorable events of the period are nevertheless not lost to the historical reader, as thanks to a work of the time, entitled "a collection of Acts and Ordinances made in the Parliament began at Westminster, on the 3rd day of November, 1640, by Henry Scobell, Esq., Clerk of the Parliament, and printed by the Printers to his Highness the Lord-Protector, 1658," these curious and interesting documents are before us. They do not, however, strictly partake of the nature of Acts of the legislature, but are for the most part ordinances of the parliament or party for the time being in the ascendant, and in the time of the Protector differing but little from imperial edicts, and numbering several hundreds. These ordinances contain the most curious and interesting details both of the proceedings of the Commonwealth and Protector, and would well repay the reader for perusal, but their insertion in this place, at any length, would too much enlarge this essay: it may nevertheless be interesting to mention a few of them,

The Acts and Ordinances during the time of the Commonwealth and the Protectorate of Cromwell, A.D. 1649 to 1660.

such as the ordinance of March 31st, 1643, "for sequestering notorious Delinquents' Estates," "a new impost for payment of the debts of the Commonwealth," "for assessing all such Members of either Houses of Parliament as shall absent themselves therefrom, or are in actual war against the Parliament," "for the raising of £66,666 13s. 4d., by way of Loan, for the better enabling our brethren of Scotland, for an assistance in the common cause of our Religion and liberty," "for taking away the book of common prayer, and for establishing and putting in execution of the Directory for the public worship of God," "for the relief of maimed soldiers and mariners, and the widows and orphans of such as have died in the service of the Parliament during these late wars," "for keeping in, Godly ministers placed in livings by authority of Parliament," an ordinance of March 17, 1648 "for the abolishing the Kingly Office in England and Ireland, and the dominions thereunto belonging," and on the 19th of the same month "for the abolishing of the House of Peers," "for the abolishing of Deans, Deans and Chapters, Canons, Prebends, and other offices and titles of, or belonging to any Cathedral Church or *Chappel* within England and Wales," and on the 19th of May, of the same year, "for declaring the people of England to be a common and free state." These Acts and ordinances probably number about four or five hundred in the whole, and form in fact a history of the Commonwealth and Protectorate.

During the 24 years' reign of Charles II., A.D. 1660 to 1684, there were 237 public and 296 private statutes enacted.

In the reign of Charles II. several important Acts were passed, especially in relation to the laws of England; such was the statute for preventing frauds and perjuries, which directed that devises of land should be attested by 3 or more witnesses; an Act "for the settling or distribution of Intestates' Estates;" Acts that have stood the test of time for near two centuries, and are drawn with a care, precision, and succinctness worthy of imitation by the framers of modern Acts. We also find Acts for the improvement of tillage and breed of cattle, for freedom and intercourse of trade (a proof of the advance of civilization), an Act for the regulating of corporations, for repairing highways and sewers (sanatory Acts occurring very seldom), and for licensing hackney-coaches, then, according to the Diary of the amusing Pepys, first coming into use, which vehicles it may be inferred, from their almost total disappearance, are now again likely to become a matter of history as things of the past.

During the short reign of the last of the Stuarts, King James II., A.D. 1684 to 1688, there were only 22 public and 8 private statutes enacted.

James II.—No less than seven of the public Acts of this reign relate to the king personally, being "for settling the Revenue on the King for life" (as if in derision of the short time he was to enjoy his life-interest), and of aids and taxes granted. There is also an Act for the attainder of the Duke of Monmouth for high treason, and for rebuilding, finishing, and adorning St. Paul's Cathedral.

In the 13 years' reign of Wm. & Mary and Wm. III., A.D. 1688 to 1702, there were 357

William and Mary, and William III.—Two of the prominent Acts of this reign were the establishing the Coronation Oath, by which the monarch of these realms is sworn to govern the people "according to the Statutes in Parliament agreed on, and the Laws and Customs of the same;" the other, the grant of the East India

Charter (9 and 10 W. III., c. 44), which may be not inaptly called the Great Charter, as having opened up the largest source of wealth and power known in the history of nations. The great points of this charter were the conceding to the East India Company, in consideration of 2 millions of capital raised for the service of the Crown of England, at 8 per cent., "the right and power to trade into and from the East Indies, in the countries and parts of Asia and Africa, and into and from the islands, ports, havens, cities, creeks, towns, and places of Asia, Africa, and America, or any of them, beyond the Cape of Bona Esperanza to the Straits of Magellan, &c." An Act was also passed "enabling posthumous children to take Estates, as if born in their father's lifetime." There is also one of a singular combination, exempting "apothecaries from serving the office of constable and scavenger, &c.;" and a vast number of naturalization bills, doubtless of the followers of the king. A large number of divorce and separation bills were also granted in this reign, by which it may be assumed that the standard of morality was not high.

public and
466 private
statutes en-
acted.

The first six Acts of the reign of Queen Anne, although entered as of Queen Anne, were in fact passed in the last year of King William III., and it is remarkable that the very last Act of his reign, passed in the year of his death, was "for the security of His Majesty's person and the succession of the Crown in the Protestant line, and for extinguishing the hopes of the pretended Prince of Wales, and all other Pretenders."

In the 12
years' reign of
Queen Anne,
A.D. 1702 to
1714, 344 pub-
lic and 605
private sta-
tutes were en-
acted.

To the wars and legislation of the time of Queen Anne, we are also mainly indebted to the land tax Acts, then granted as a war tax, for carrying on the war against France, but which, like the income tax of modern days, we practically know to have become a *peace* tax. We also find an Act for establishing "an union of the two Kingdoms of England and Scotland," and the well-known Acts of 1708—1709 (which the legislature would do well to extend), for the registration of deeds, conveyances, wills, and incumbrances in Middlesex, and certain parts of Yorkshire.

In the reign of George I., beyond the ordinary course of legislation for the service of the state, the time of the Parliament was, as well as that of the nation at large, from the highest to the lowest, almost entirely absorbed in the events consequent on the South Sea Bubble; the results of which had nearly ruined the kingdom and endangered a national bankruptcy; and the state of the public mind can be well understood when a second special session of Parliament took place in the 7th of this reign, in which only 1 public Act was passed, "for making several provisions to restore the publick credit, which suffers by the frauds and mismanagements of the late Directors of the South Sea Company, and others." Several naturalization bills were passed in this reign, which from the decided German character of the names, such as Ditelef von Theinen, Melusine, Baroness of Schulenburg, Gerard Van Neck, and many others (which names are only referred to, inasmuch as they are now never met with), were doubtless Hanoverian subjects who had accompanied his Majesty to this country on his accession to the Crown.

In the 13
years' reign of
Geo. I., A.D.,
1714 to 1727,
there were 377
public and 381
private sta-
tutes enacted.

During the 33 years of the reign of King Geo. II. A.D. 1727 to 1760, there were 1,547 public and 1,211 private statutes enacted.

An Act was passed in the 9th of this reign (George II.), which expunged an Act that had long been the disgrace of the Statute Book, was the symbol of a degraded superstition, and the reproach of a civilized nation, and under which so many unfortunate persons had suffered in preceding reigns: this was the Act against "Conjuration and witchcraft, and the dealing with evil and wicked spirits;" and to repeal one also, passed in the Parliament of Scotland, in the 9th year of Queen Mary, intituled "Anentis Witchcrafts;" an Act also that visited such persons, as pretended to exercise or carry on any kind of sorcery, enchantment, or conjuration, with severe penal consequences.

An enlargement of the excellent principle of registration of deeds and other incumbrances, was also enacted in this reign, extending the registry to the north riding of Yorkshire. A melancholy list of the attainder of no less than 45 persons attainted of high treason, in the 19th year of this reign, follows, numbering among them some of the highest rank and noblest blood of Scotland, for having taken up the cause of the Pretender in 1745, adding thereby to the many penal statutes which incumbered the Statute Book, by reason of that unfortunate cause, which in this year sunk to rise no more.

The long and eventful reign of George III. was productive of more consequences to the interests and destinies of England than any that preceded it. Whether we consider the important events which in the early part of it led to the loss of our American colonies, or the causes recorded by the unwise statutes passed in relation to them, or the continued wars which desolated the nations of Europe for a quarter of a century, and the vast amount of blood and treasure expended, which has resulted in the incubus of a national debt, the pressure of which will long continue to be felt by the people of this country; or the large and extended commerce and dominion, and high state of civilization, prosperity, and social improvement (unfortunately again to be interrupted by the present barbarous war of aggression), it may be safely accorded as one of the most extraordinary reigns in our history.

During the sixty years of this reign the statutes grew to an amount of legislation truly formidable; but when we consider the vast amount of taxes imposed in this time—the customs, excise, lottery, and stamp acts, the continued imposts on every conceivable article by Act of Parliament, the enormous loans raised almost in every year, the numberless penal Acts (happily, for the most part, now no more), the Acts against sedition, bank restriction Acts, and the Acts connected with the army, navy, and militia, our astonishment will be somewhat diminished at what appears at first sight the very excess and exuberance of legislation.

There is also recorded among these statutes, as has been just adverted to, the unwise Acts which at one time prohibited all trade and intercourse with the colonies of New Hampshire, Massachusetts Bay, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and the three lower counties of Delaware, Maryland, Virginia, South Carolina, and Georgia, by reason of the rebellion, occasioned, as it certainly was, by injudicious legislation and the imposition of taxes.

In the long reign of 60 years of Geo. III. there were enacted the largest number of statutes on record, amounting, in the whole, to more than had been passed in the five centuries from Henry III. to Queen Anne. The title under which the Acts are recorded underwent several changes in this reign.

From 1760 to 1795 there were—

4,159 Public and

3,221 Private statutes enacted.

From 1798 to the time when a new division of the statutes took place in 1816 there were enacted—

2,936 Public statutes

2,321 Local and personal Acts, and

1,413 Private Acts.

This Act is followed, in two short years, by an Act "declaring it was expedient to declare that the King and Parliament of Great Britain would not impose any duty, tax, or assessment, for the purpose of raising a revenue in any of the colonies, and repealing the Act of 7 Geo. III., which imposed a duty on tea imported from Great Britain to America," which had been the proximate cause of the rebellion, and resulted in the separation and loss of one of the finest possessions of the Crown.

As a reverse of the picture, we may add, that the number of local Acts, for the purpose of improvements to the cities and towns of the kingdom and country generally, such as inclosure Acts; draining, em-banking, and improving of commons, waste lands, and marshes; for erecting bridges and churches; constructing canals and harbours; paving, lighting, and improving towns; and turnpike and road Acts (they being, in those days, the grand highways, as railroads are now), is truly surprising and gratifying. The number, as will be seen, amounts to several thousands in this reign.

To the honour of the country and of their noble and disinterested supporters, many Acts of this reign also pourtray the anxiety and wish of the legislature for the abolition of the slave trade. The Act of Union with Ireland, which took force from the 1st of January, 1801, occasioned the alteration in the title of the statutes of the realm, which thenceforth became the Parliament and statutes of the United Kingdom of Great Britain and Ireland.

George IV.—The laws of capital punishments met with the serious attention of the Parliaments of this reign. That they had long required the attention of the legislature was patent to all men; but, like the revision of the subject of the present essay, the statutes of the realm, those laws which had long been a disgrace to the country had not, until the present time, found a minister† willing and able to encounter the Herculean labour of their revision.

This, however, was now to be accomplished; and the statutes which constituted it felony, by a law of Elizabeth, "for the abduction of women;" by an Act of George I., for helping to stolen goods; for certain offences by gipsies or Egyptians, as they were then called, by statutes of Philip and Mary; for *destroying Westminster bridge*, by an Act of George II.; and for privately stealing in a shop, coach-house, or stable, were repealed; the astonishment being that such sanguinary laws should have been so long suffered to incumber the statute book.

A farther Act on the subject, which awarded the punishment of death, without benefit of clergy, by certain Acts of George II. and George III., against persons convicted of personating or procuring

* From this time the title of the statutes has been as follows:—

- 1 Public General Acts.
- 2 Local and Personal Acts *declared public*, and to be judicially noticed.
- 3 Private Acts printed by the King's Printer, and whereof the printed copies may be given in evidence.
- 4 Private Acts not printed.

And which arrangement has been continued to the present time.

† Sir Robert Peel.

And from
*1816 to the
end of this
reign there
were en-
acted—
718 Public
statutes,
479 Local
and per-
sonal Acts,
215 Private
Acts
printed,
and
167 Private
Acts not
printed .

14,800

In the 10
years' reign of
Geo. IV., A.D.
1830 to 1830,
there were en-
acted—
1,066 Public
statutes,
1,462 Local
and per-
sonal Acts,
500 Private
Acts,
printed co-
pies of
which
could be
given in
evidence,
and
192 Private
Acts not
printed

3,223

any one to do so, an out-pensioner of Greenwich Hospital, whereby they should obtain the money due on such out-pension, was also repealed, and the *mild* penalty of transportation for life beyond seas, or for not less than seven years, or imprisonment, was provided in its place for the delinquent.

These beneficial reforms were followed by the celebrated Acts of the 7 and 8 Geo. IV., relating to the criminal laws generally, whereby no less than 138 penal statutes, from the time of Henry III. to the reign of George IV. (some of which inflicted death, and many most severe punishments, for various offences), were either entirely or partially repealed or amended, and some admirable Acts substituted of a more merciful and consistent character, and for improving the administration of justice in England.

When it is added that several other good Acts are numbered in the statistics of the statutes of this reign, such as that "for the building and promoting the building of new churches," for the amendment of the customs and excise laws, the consolidation of savings' banks, the establishment of the new Metropolitan Police, and for the consolidation of the laws relating to friendly societies, it may be safely affirmed that the greatest praise is due to the legislature of this reign, which shines prominently forth in the enactment of excellent laws.

If the short reign of William IV., is not fertile in any great or important events for judicial or social improvement, one record remains which will mark this reign as prominent in the history of the country—that of the Reform Bill, which was passed on the 7th of June, 1832, after the most prolonged debates, and with a difference of opinions, both in the House of Lords and Commons, greater than had ever before been heard in the legislature. That such an important measure, enlarging and changing as it did the constitution of the kingdom, should have raised the expectations and excited the passions of the country, is not surprising; that such a measure was needful, and possibly prevented the dangers of a popular convulsion, is now admitted; and so passed away, by this Act, many boroughs which had sent members to the legislature from very ancient times, and properly removed them to cities and towns representing the commerce and intelligence of the country.

That such a measure has proved incomplete, in preventing corruption, has been painfully evidenced by many of the elections since that period; and that it is not intended to be a finality of reform in the representation of the country we may reasonably infer from the public opinion of the nation, and from the expressed views of the government.

The other material Acts of this reign were for the establishment of the Court of Bankruptcy (which has required many Acts to amend it); for continuing the commission of inquiry into the charities of the kingdom; for amending the laws relating to the courts of equity; for regulating the labour of children and young persons in the mills and factories of the United Kingdom; for the amendment of the laws and the better advancement of justice; the regulation of municipal corporations; and for amending the laws relating to sewers.

In the 7 years' reign of King Wm. IV. there were enacted
 678 Public general,
 726 Local and personal,
 218 Private Acts printed and to be judicially noticed, and
 110 Private statutes not printed
 1,802

The statutes of the reign of Her present Majesty, are remarkable for their tendency to social improvements, for the full development of the great inventions of the age, which the science of steam, of railways, and electric power has produced; for the amendment of the jurisprudence of the country, and, above all, for the sanitary care and precaution (too long neglected) of the kingdom, evidenced by the Acts of the legislature on these important subjects.

Among the valuable statutes of the parliaments of Queen Victoria, may be mentioned those Acts which affect the health and comfort of the people, and are appropriately called sanitary measures; such are those relating to metropolitan sewers, the Towns Improvement Act, the Metropolitan Burials Act, the Acts relating to intramural and other cemeteries, to the metropolitan water supply, to the health of towns, the Act for promoting the public health, the establishment of the board of health, and many others; and it only remains for those intrusted with the practical working of these Acts to perfect and carry out the admirable intentions of the legislature for the lengthening of the life, and the improvement of the health, morality, and cleanliness of the humbler classes especially, and of the community generally.

The numerous Acts for the improvement and amendment of the proceedings in the courts of law and equity, so long needed, and it may be added, yet so far short of reasonable perfection, are also worthy of mention; such are the Acts to amend the law of real property, the County Courts Bill, and the Acts for diminishing the delays and expenses of the proceedings in the High Court of Chancery in England, &c.

Those Acts also which affect the state itself, and have been passed in this reign, will be recognized in the renewal of the bank charter, in 1844, whereby the existence of that monopoly is restricted to the pleasure of the legislature, which has liberty to determine its onerous connexion with the company, now called the Bank of England, after the 1st of August, 1855, on giving twelve months' notice, and the payment by Parliament of the eleven millions, fifteen thousand, one hundred pounds, and other sums in the Act mentioned, due by the country to that corporation.* The numerous Acts regulating joint-stock banks, railways, and joint-stock companies, the excellent Act, known as the Act for facilitating the sale of Incumbered Estates in Ireland (which it may be safely prognosticated will prove the regeneration of that fine country), and last of all, those memorable Acts of the last session, the redeeming the South Sea annuities and issuing exchequer bonds, the repeal of the stamp and soap duties, for which we are indebted to the present chancellor of the exchequer, present the largest amount of beneficial improvement perhaps ever enacted in one single reign.

The succinct details of the number of the statutes passed in each reign having been completed, and the important events to which they relate briefly enumerated, the following tabular view may be found convenient as a summary of the foregoing results:—

* In this place it is scarcely possible to avoid asking why the State does not become its own banker.

In the reign of Her present Majesty Queen Victoria to the last Session of Parliament in 1853 there have been enacted—
 1,561 Public general,
 2,770 Local and personal,
 546 Private, the printed copies whereof are evidence, and
 154 Private statutes
 —————
 5,331

Tabular View of the Number of Statutes passed in each Reign from the time of Hen. III., A.D. 1225, to the 16th and 17th of Her Majesty Queen Victoria, 1853.

Names of Sovereigns of England.	Time of Enactment.	Number of years reign of each Sovereign.	Number of Public Statutes in each Reign.	Number of Private Acts made in each Reign.	Number of Local and Personal Acts to be judicially noticed from the time of their being so designated in each reign.	Number of Private Acts printed by the King's Printer, and whereof printed copies may be given in evidence from the time of their being so designated.	Number of Private Acts not printed passed in each Reign.	Total.	Average Number of Statutes passed in each Reign, per Annum.
Henry III. [The Statutes begin at the 9th year of this reign].	1225-1272	56	15	..	..	..	..	15	·3
Edward I.	1272-1307	35	56	..	..	..	..	56	1·6
Edward II.	1307-1327	20	23	..	..	..	..	23	1·1
Edward III.	1327-1377	50	386	..	..	..	..	386	7·7
Richard II.	1377-1399	22	213	..	..	..	..	213	9·7
Henry IV.	1399-1413	13	142	..	..	..	..	142	10·9
Henry V.	1413-1422	9	70	..	..	..	..	70	7·8
Henry VI.	1422-1461	38	200	..	..	..	..	200	5·3
Edward IV.	1461-1483	22	54	..	..	..	..	54	2·4
Richard III.	1483-1485	2	15	18	..	..	..	33	16·5
Henry VII.	1485-1509	24	114	194	..	..	..	308	12·8
Henry VIII.	1509-1547	38	412	301	..	..	..	713	18·8
Edward VI.	1547-1553	6	118	49	..	..	..	167	27·8
Mary, and Philip and Mary }	1553-1558	5	82	29	..	..	..	111	22·2
Elizabeth	1558-1603	44	272	166	..	..	..	438	9·9
James I.	1603-1625	22	134	168	..	..	..	302	13·7
Charles I.	1625-1649	24	51	34	..	..	..	85	3·5
The Common- wealth & Pro- tectorate, Acts & Ordinances }	1649-1660								
Charles II.	1660-1684	24	237	296	..	..	..	533	22·2
James II.	1684-1688	4	22	8	..	..	..	30	7·6
William & Mary & William III. }	1688-1702	13	317	466	..	..	..	783	60·2
Anne	1702-1714	12	344	605	..	..	..	949	79·1
George I.	1714-1727	13	377	381	..	..	..	758	58·3
George II.	1727-1760	33	1,547	1,244	..	..	..	2,791	84·6
George III.	1760-1820	60	6,953	3,221	2,801	1,658	167	14,800	246·7
George IV.	1820-1830	10	1,066	..	1,165	500	192	3,223	322·3
William IV.	1830-1837	7	678	..	796	218	110	1,802	257·4
16 & 17 Victoria..	1837-1853	16	1,864	..	2,770	546	154	5,334	533·4
Totals† ..	..	..	15,762	7,180	7,832	2,922	623	31,319	

* The title of the statutes were frequently changed in this reign. From 1760 to 1798 they were designated as Public Statutes and Private Statutes. From 1798 to 1816, they were designated as Public General Acts; Local and Personal Acts declared public, and to be judicially noticed, and Private Acts; and from 55 Geo. III., 1816, when the title was again changed, they were designated:

1. Public General Acts.
2. Local and Personal Acts, declared public and to be judicially noticed.
3. Private Acts printed by the King's Printer, and whereof the printed copies may be given in evidence.
4. Private Acts not printed. Under these designations the statutes have ever since remained. See also ante page 152, for the division and number of the statutes passed in the reign of Geo. III.

† The above computation does not include the Statutes Temporis incertis, nor the Acts and Ordinances of the Commonwealth and Protectorate.

Tabular View of the number of Acts of Parliament passed in the last Seven Years for Railways, Bridges, Canals, Docks, and other Local Purposes.*

Year of Enactment.	Bridges, Canals, Docks, Harbours, Piers, &c.	Relating and giving powers to Public Companies.	Draining and Inclosing Lands.	Lighting, Watching, Paving, and Improving Towns.	Turnpike and other Roads.	Railways.	Miscellaneous.	Total.
9 & 10 Vict., 1846, to 10 & 11 Vict., 1847	44	35	14	125	11	424	..	653
11 & 12 Vic., 1847-8, to 12 & 13 Vict., 1849 }	28	33	9	41	17	113	10	251
13 & 14 Vic., 1850, to 14 & 15 Vic., 1851	22	26	4	53	30	93	11	239
15 & 16 Vic., 1852, to 16 & 17 Vict., 1853..... }	33	53	7	69	53	151	13	379
	127	147	34	288	111	781	34	1,522

* From Session beginning 20th March, 1846, to Session ending 20th August, 1853, comprising a period of about 7 years and a-half, and averaging upwards of 200 of these important Acts alone in each Session of little more than 6 months' duration.

When we consider the enormous amount of legislation which the foregoing tables pourtray, the large and important interests politically and socially concerned, the arduous labour and attention bestowed before any important public Act is passed by the assembled parliament, the extensive and growing nature of private legislation, the extreme length and diversity which most of the public statutes now possess, and the comparative shortness, in point of duration, of the session, the mind is lost in wonder, that so much is, or could be, perfected in the time allotted to these great national objects; and a deserved tribute of praise must be given to the members of the legislature of both houses, for the perseverance, industry, and talent, which they display, and of which the tables now before us constitute the embodiment.

This, then, is the mass of statute law which has been accumulating for ages, and is one of the important branches of national interest which has never yet been thoroughly revised and reformed, although constantly the theme of animadversion, and the subject of recommendation, by the most enlightened statesmen of all times. Various attempts, it is true, have been made by the repeal of various

statutes,* to lighten the statute book, in some measure, of its burthen, and many statutes have been wholly or partially repealed during the reigns of Geo. IV., Wm. IV., and Her present Majesty; but no intelligent method or system has been adopted; so that what with expired Acts, Acts half repealed, Acts amended, and Acts to amend those Acts already amended, the great records of the state have been left, if possible, a more chaotic and unintelligible waste than they were before.

That legislative consolidation *is* attainable has been fully admitted by various high authorities† that have considered, and by the committees that have sat on, the subject, and a plan for a revision might not be difficult to devise, however laborious its execution, which plan might embrace the adoption of a classification of subjects, such as statutes relating to the army, navy, and militia; to public revenue, customs, excise, loans, supplies; to the East India Company, poor, and stamps. It might also be possible to effect a consolidation of the Acts relating exclusively to the criminal law and jurisprudence of the country; also of all sanatory laws; and a new arrangement, and separation from the Statute Book, of Acts passed for local and private objects (which now so laboriously absorb so much of the time and attention of the legislature) might be adopted; and finally, by the appointment of a permanent commission, with an efficient staff of officers, whose special duty it should be to carry out, by a division of labour, these great and truly desirable and important objects, we might bring about the absolute expulsion of all expired, obsolete, or repealed statutes. It only remains, in conclusion, to add that the statesman, be he whom he may, who shall devote himself to the attainment of this object, will deserve the praise and respect of his country, for having done what the learned men, whose names have been referred to in this essay, were justified in calling "an excellent work of honour to His Majesty's (now Her Majesty's) times, and of good to all times."

* The number of repealed or partially repealed statutes, although very considerable, particularly in these reigns, it has been found a hopeless task to arrive at, in the present state of the statute book, with any just approximation.

† Lord Chancellor (Francis) Bacon, Lord Hobart, Mr. Heneage Finch, and others, are said to have made great progress in the undertaking, under the commands of James I. Reports were also made favourable to this object, in 1796 and 1803, to the House of Commons, on the promulgation of the statutes, and on temporary laws and reports of the committee of the Lords made in 1820.

On Agricultural Statistics. By SAMUEL PAULL, Esq.

[Read before the Statistical Society of London, Monday, 20th February, 1854.]

ABOUT forty years ago I took a subordinate professional share in a tedious lawsuit respecting tithes over a large parish. I represented the clergyman; and as, when I took up the subject, it had been in question for several years, it will be readily imagined that a great deal of bad feeling raged in the litigants. My business was to obtain, as closely as I could, parish corn statistics; but from the farmers I could get no information whatever, and from other parties none at all satisfactory to our counsel in the suit. Still I was told by my superiors in the business that I must obtain the information they needed, and, in this extremity, I cast about in my mind for means to accomplish the object in view. It will be seen that I had to get important information without putting a question to any occupier of land in the parish, or indeed to any other person, and I now proceed to explain in what way I solved this knotty statistical problem. I had a map and terrier, or particular, of the parish lands, separated into the various holdings of the farmers. It may be necessary to premise that in every parish there is a similar terrier used for the purpose of making parish rates, and for other parish matters. Having, then, this map and terrier at my command, I soon saw that if, by any stealthy means, by day or by night, I or any individual well acquainted with the parish could walk over the several farms at proper seasons of the year, noting on the maps and in the terrier the several crops in the several fields, there would be no necessity for any communication with the farmers in respect of their corn and other crops; we should obtain the required information by the means now indicated; and as the parish terrier gave the statute acreage or computed area of each field, we should ascertain the total quantity of land in every farm, under crops of all sorts.

By this simple means, we got all the corn statistics needed by our solicitor and counsel.

The very learned solicitor who conducted this important tithe case took note of my efforts to assist him in the management of it, and as he had a very high professional position, and was much employed in tithe questions, where law, learning, and close investigation were required, it was his pleasure to have me about him when engaged from time to time on knotty points; and in this and other ways I came to form a deliberate judgment on the question of parish, corn, and vegetable statistics, and to possess a quiet and safe means for obtaining them, as well as to conceive plans and arrangements of public utility, supplementary to corn statistics. To some of them I may have occasion presently to refer. My immediate object is to apply my personal experiences to the collection of the statistics of agriculture on a larger scale.

In a statistical sense, a nation is only an aggregate of parishes, as parishes are of farms; so that, if we have a sound means of obtaining corn statistics for one parish we have a sound means of obtaining the corn statistics of all of them. Let us look at this in detail. We have a terrier or particular of every parish, with or without maps,

and there are in every parish some individuals distinguished for local knowledge in respect of the parish lands—men who, on looking at the particular, can recognise every field and its locality. Now, at given times of the year, that is to say, when the lands are bearing their crops, a person so qualified could walk over the parish, map and terrier in hand, and mark every field with its visible crop; and while this individual was so employed, the parish schoolmaster, or some other competent scribe, could prepare a copy of the parish terrier, giving columns for every sort of grain and vegetable crop. Then these two men, their mutual labour being so far advanced, should introduce into its proper column the area of each field, and obtain a correct total for every column. This done, I submit that they would have obtained safe parish statistics, in so far as acreage and produce are concerned.

But here an important question arises as to the ability of the individuals whom I thus propose to employ to furnish the requisite information. In answering this question, we must not allow ourselves to be prejudiced by the personal appearance of the agriculturist or agricultural labourer; we must not allow the coarseness of his manners, if coarse they be, to blind us to his intelligence—to the faculty always in him of declaring the average produce per acre of his parish for any kind of grain or vegetable, and the consequence of unusually good or bad seasons, as they affect the average produce. After a life-long acquaintance with these men, I do not hesitate to assert that this instinctive knowledge of theirs would be justified by elaborate inquiries on the subject of parish produce. This fine faculty then being in every parish, we need not go beyond its limits to find men capable of declaring at any point of the time that a particular crop takes to reach maturity what the result will be in respect of production, both absolutely and with reference to the average produce; and were such men furnished by Government with skeleton printed papers, comprising appropriate leading questions, with clear directions how to fill them up, I submit that by these simple means our Government would have year by year safe corn and vegetable statistics of produce from every parish.

The terriers or particulars already referred to, together with the acreage and parish produce-papers now briefly noticed, having been collected from all the parishes in the kingdom, the Government, by the assistance of official men in the office of the Board of Trade, would ascertain the number of acres under grain and green crops in each parish, together with the aggregate produce of each crop; and by a simple process of addition, the whole quantity of land under every kind of crop, and the entire produce of the nation, as one large farm.

Having now placed before the Society these simple suggestions for collecting the statistics of agriculture, as starting points for discussion, I proceed to offer a few observations bearing upon other methods of procedure which have been suggested or put in practice. I must premise that up to the time of the destruction of the corn laws, and until a short time back, our agriculturists, as a body, were as little disposed to answer questions for statistical purposes as they were of old for tithe purposes. Novelties generally engender distrust, and that produces hesitation, and hesi-

tation, if not met by the soundest discretion, leads to ill temper; and it is a serious question with me whether our English agriculturists are now, or are likely to be for some time to come, in such an improved condition of mind as to be able to value agricultural statistics as a national necessity—as a subject having important bearings on the importation of corn, and that importation reflecting its consequences on our home corn market, and consequently to volunteer, or willingly to afford, information leading to the results we have already seen how to reach by other means. It is no light thing to ask tens of thousands of men to disclose their private affairs for the benefit of the nation, before they have been made clearly and fully to see their own personal advantage in responding to such inquiries. The suggestions which I have made for obtaining agricultural statistics without questioning our farmers, derive additional importance from this consideration of what is due to the sensitiveness of our agriculturists in respect of their private affairs, a sensitiveness which gives additional importance to the fact so honourable to them, that the Government has entirely trusted to their generous disclosures for the agricultural statistics of three counties in Scotland.

I shall presently offer some suggestions as to what our agriculturists ought to be encouraged to do for themselves before they shall be invited to unfold their personal affairs for the good of the public. In the meantime, I will bring concisely under the notice of the Society the means which have been used for obtaining the corn statistics of a few counties, as well as the other means which have been publicly recommended for obtaining corn statistics for the whole nation.

In order to duly estimate the value of the Government measures which have been adopted for the collection of corn statistics, and the other means which have been suggested by individuals, one important question should be borne constantly in mind. These statistics having been acquired by any given means, what amount of confidence will be awarded them in the business transactions of the nation? The answer to this question is the test of the practical soundness of all statistical plans. An assertion contained in a letter on agricultural statistics, which appeared in the “*Times*” newspaper of the 28th of last October, will aid us in forming a sound opinion on this vital point. The letter was signed “*A Farmer*,” and was evidently written by a thoughtful man. He is of opinion that our farmers would not make accurate returns in answer to official inquiries, because “my acquaintance with the class leads me to think that an innate jealousy of letting their nearest neighbours know what they are doing would militate very materially against their rendering accurate returns.” Here, then, we have the Government, on the one hand, asking statistical information from our farmers, and putting faith in their answers, and, on the other hand, one who professes to know the minds of the farmers, declaring that no dependence can be placed on a farmer’s replies to statistical inquiries. Now the consideration which makes the question before us so important is, not what statesmen think on the point, or what “*A Farmer*” thinks on it, but what the men think on it who may wish to govern the corn market in defi-

ance of statistical returns indicating national corn necessities, and who may, for the purpose, treasure "A Farmer's" letter in the "Times" as a foundation on which to construct the permanent assertion that the corn returns had been falsified through the impulsive innate jealousy of our farmers. Should our bankers and merchants believe such assertions as this, there would be an end of the value of agricultural statistics for mercantile purposes. No men in the nation ask more earnestly for these statistics than our bankers and merchants, but then they must have them utterly apart from doubt or dread.

I will now bring under your notice the plan adopted by Government for obtaining agricultural statistics for three counties in Scotland, and which the farmers in those counties have cheerfully and practically accepted. Mr. Hall Maxwell, the Government Agent, in forwarding the returns from the counties of Roxburgh, Haddington, and Sutherland, to the Board of Trade, thus wrote:—

"The machinery employed in obtaining the estimate was simple, and proved efficient. In every district there was a committee composed of the enumerator and experienced farmers, selected from and representing each of the associated parishes. The nature and object of their services were explained in a circular addressed by me to the members of these committees before harvest. Their attention was called to the standing crops, and they were requested to institute inquiry and to obtain information within their respective parishes. Their observations were continued through the progress of the harvest, and at a late period, when experiments in weighing and threshing had been made, the committees were convened by their enumerators, the views of the members were compared and considered, and a statement was prepared and forwarded to me showing the average acreage produce of each parish in bushels of grain and tons of roots.

"It is my duty to report to my lords that I experienced in every district the utmost anxiety to forward the object in view in a thoroughly faithful manner. The communications I have had directly with the enumerators warrant me in making this statement as to them, and they concur in representing the alacrity and good feeling with which the members of their respective committees co-operated with them.

"From this it will be observed that the returns are an estimate prepared by experienced farmers from each parish under the guidance of an enumerator for a district, the number of acres under each crop having been previously ascertained from printed schedules sent to every occupier of land. The representative farmer from each parish and the enumerator, in consultation, then put down under the various heads what, from inquiry and observation, they believed to be the average produce of each parish per acre, and that multiplied by the acres under various crops gives the result obtained.

"The cost of obtaining these returns is not yet before us, but at the estimate of 800*l.*, which we believe was the sum authorized by Government for the experiment; the cost of obtaining similar returns for Great Britain on the same principle would amount to 80,000*l.* We believe that a much less expensive and more accurate system

could be devised, and it is very doubtful whether the plan of the Highland Society, however successful in Scotland, will be found at all practicable in the English counties where the land is so much more subdivided and intermixed."

This, then, is the Highland Society's scheme as practically sanctioned by Government.

The above quotations appeared in the "Times" newspaper of the 11th of December ultimo, but on the 17th of last September the letter already brought under your consideration appeared in the same paper from the hand of "A Farmer," in which he argues in favour of these corn statistics, affirming that, in order to be of any use these returns must be made by the producer alone. But shortly afterwards Mr. Cooke published a letter on agricultural statistics, addressed to the President of the Board of Trade, advocating the employment of district surveyors instead of the "producers." This induced "A Farmer" to reconsider his suggestions.

The pith of his letter inserted in the "Times" of October 28th, after his consideration of Mr. Cooke's suggestions, will be found in the following quotations:—

"What Mr. Cooke says about acreage farms, if I understand him right, would be of no practical use; the circumstances affecting different farms vary every year; different lands are variously affected by seasons and many other circumstances well known to practical farmers. There is no other way of obtaining accurate information such as would be of any practical use, than by ascertaining what each inclosure is likely to supply for the current year. The only question is, whether this information should be supplied by the occupier or through the medium of a district surveyor; either would suffice if it was well done; but I am inclined to think that the system of district surveyors would be most to be relied upon, as he would make it his business, while the occupier might be apt to think it a trouble imposed upon him, and that as long as he made the return it would not matter whether it was accurate or not." And then follows the sentence before quoted: "my acquaintance with the class leads me to think that an innate jealousy of letting even their nearest neighbours know what they are doing would militate very materially against their rendering accurate returns."

"With respect to the power of obtaining the contents of each separate inclosure, without incurring the expense of a new survey, I will merely mention that no land valuer finds any difficulty when he is employed to value an estate in obtaining the information which he must know to value the acreage."

In the extracts which I have now laid before you I have literally produced for your consideration all the rational schemes I have ever seen to meet our imminent statistical necessities, for, as is well known, we really cannot say within 10,000,000 quarters or so what quantity of grain we produce in this kingdom.

As to Mr. Cooke's scheme, I shall, I hope, be pardoned for quoting a paragraph from the "Daily News," extracted from a leader on statistics, which appeared on November 11th.

"The newest proposition on this head is that of Mr. Cooke, in the just published letters to the President of the Board of Trade. He

proposes that in each county a certain number of parishes should be carefully selected as representing the diversities of soil, culture, and climate existing throughout the county, and that an unintermitting observation of these parishes should go on throughout the year; a frequent computation of the whole being made and published from the sample. We need not now point out that the one thing to be established is, that any selection of parishes can be representative of the whole. It is possible that an average of soil may be obtained, and that an upland district here, a lowland district there, and a maritime or alluvial portion elsewhere, may be indicated as pretty fairly representing $\frac{1}{4}$, $\frac{1}{6}$, or $\frac{1}{10}$ of the county, (though our parish bounds have nothing to do with considerations of soil and climate,) but what is to be done about differences of agricultural skill? How are we to get at any average, or be sure of any sample of farming ability? To us, we acknowledge, this part of the business seems hopeless; so long as a good farmer can get more produce out of bad land than a bad farmer can get out of rich land, we do not see how the sample principle can be brought into application at all. It is not even true yet, however it may be hereafter, that the example of profitable farming spreads. Nothing is more common than to see the field of the sluggard, lying between the little hills that are re-joining on every side, in fertility and freshness. If, however, there are many who agree with Mr. Cooke about local averages of farming skill, by all means let them try his proposed experiment. There are already three English counties from which full returns have just been obtained. It must be comparatively easy to obtain next year's statistics from these three counties; let both methods, that of total and that of sample returns be tried, and we shall have, in the comparison of their results, something like evidence of how the easier plan would answer. If we admitted Mr. Cooke's estimate of the cost of a total survey (that it would cost about 300,000*l.* a-year,) we might be nearer to agreeing with him about a substitute, but we are far from believing that when general and regular agricultural surveys are permanently instituted the cost need be anything like this. The fees or salaries of existing land valuers, with a contingent business, are not fair data from which to calculate the expenses of an organized and perpetual survey.

"As to the agency, it is clear that whatever we may at last decide upon, we must not apply to the occupiers of the land. Putting aside all doubts springing from moral grounds, there can be little hope of reliable returns from men so various in capacity, in education, and in tendencies of mind; so busy, too, probably so unwilling, and certainly so irresponsible. Their relations with their landlords do not admit of their being our statistical agents, nor does their daily business; and it will be some time before they, as a body, become aware of the advantage to themselves of what we are seeking to obtain. We must have a good agency to begin with, probably of district surveyors, (or poor law officials,) who might, however, unite a good deal of other business with that of preparing their statistical return. The work will probably be expensive at first, and if it is we ought not to grudge it. It is not conceivable that it could cost so much as the country loses by any one year of groping tillage, uncon-

needed procedure, and random production, to say nothing of the losses from needless panics on occasions, and from the timorous uncertainty which beset us in one form or another in every day of the year."

With the exception of an admirable letter on statistics, addressed by Lord Ashburton to the Statistical Committee of the Alresford Union, and a letter addressed by Mr. Pusey to Lord Ashburton on statistics, I really have nothing more to put before the Society worthy of notice; and as the letters of Lord Ashburton and Mr. Pusey relate to nice statistical details, and not to fundamental plans for obtaining them, I do not touch upon them on this occasion.

We have, therefore, three plans before us:—1. That of which I had personal experience so many years since, and which is sanctioned by my judgment in mature years; 2. That of the Highland Society adopted by Government; and 3. That proposed by Mr. Cooke and timidly approved by "A Farmer," who evidently finds a difficulty in deciding the question whether the returns should be made by "the producers or district surveyors." My plan would cost, perhaps, 50,000*l.* a-year, the Highland Society's plan about 80,000*l.* and Mr. Cooke's, as he says, about 300,000*l.* a-year.

Whatever the plan which may be ultimately adopted, we must not hope to accomplish all we could desire at first, for if we did, we should certainly be disappointed. Indeed, it is quite possible that were we very successful at the onset, our cause would be injured rather than benefited. For there is as fixed a law for governing the march of great purposes as there is for the growth and development of human beings. A child must learn to walk well before it can master all the other paces and movements necessary for the purposes of its active life.

The object which the statesman has in view in adopting measures for obtaining corn statistics is simply to learn how much food we ought to import in order to feed our population. We can only hope to be able to return a complete answer to this question when we shall have profited by the education of experience in the practical working of the statistical scheme which may have been selected. But I am decidedly of opinion that in order to obtain a sound answer to the question, how much food must we import to feed our people? we should all avoid flinging ourselves on the confiding courtesy of the farmers, and the employment of professional men whom we should have to pay heavily for their unnecessary services—services of no advantage to anybody but themselves, and very likely to give serious annoyance to the land tenants of the kingdom. The employment of agricultural labourers and schoolmasters for the collection of parish statistics seems to me to have been a sound and safe plan for the purposes which I had originally to accomplish, and I would now make use of it for the larger purpose of collecting the statistics of agriculture. If it be objected that such an arrangement is scarcely sound and safe for a national purpose, and that it is even below the dignity of such a vast and important undertaking, I would reply that if such men are truly equal to such duties for a parish, as my own experience proves that they unquestionably are, it would be wrong to go far above them for our agents. For affairs of this character I am convinced that an agent needs no professional acquirement whatever.

All that he requires is a very ordinary commercial education, some local knowledge, sound common sense, and a good moral character. All beyond this would, for such a business, be literally a demerit.

I am old on this subject of agricultural statistics. Many years ago I travelled much about the country for the purpose of intercourse with agriculturists on it and other kindred matters, and finding them, for the most part, either doubting the possibility of obtaining sound statistical returns for the nation, or fearful that an inquisitorial agency would be necessary for the collection of them, I at once saw that, to substantially serve this great cause, I must put forward for it the agency, or some such agency, as I had used for tithe statistics, and roundly protest against the employment of all agents at all likely to rouse the just suspicions of our farmers. I saw, too, that by boldly fixing the attention of statesmen on a simple agency for these statistics I might, happily, prepare them for the rejection of such complicated and questionable agencies as would, in all probability, come before them for consideration when the subject of agricultural statistics should become popular, and engage the pens of other men.

If I am entitled to any praise at all from your Society it is chiefly for this forecast. I have opened this paper with a statement of the simple means I used for the obtaining tithe statistics in the hope that, in a consideration of them, your judgments will discard more elaborate and expensive plans. I am happy in the belief that statesmen and our best statistical thinkers have arrived at the conclusion that professional or any other expensive agency is not necessary for this important but yet very simple business. For myself, my simple wish is this, that Government would give us, for the nation, a plan as simple in its agency as that lately tried in Scotland, or as that now in course of trial in English counties, with this proviso, however: that whatever scheme for the collection of agricultural statistics shall be finally adopted by Government, it will have been crudely concocted if it do not, in practice, affirmatively answer this question—does it count every acre of land under tillage through the kingdom? If it do not it will be unworthy the age in which we live, the sanction of statistical thinkers, and the funds of those who traverse the world for the food needed by our population. My old tithe plan fully meets this requirement, and all plans which do not will be, in practice, delusive.

It would seem that our statistical friends in Scotland feel that the plan they have adopted for the collection of statistics is not altogether worthy of our acceptance. For my own part I do not admit the force of any of the objections urged against the farmers being employed as agents for these statistics. I know the men too well to feel any misgiving with regard to them, but I feel that objections would be constantly advanced should the farmers be so engaged as agents, and that mercantile confidence in the accuracy of the returns would be destroyed.

It has been suggested by Mr. Cooke, "A Farmer," and others, that district surveyors should be employed as agents for collecting agricultural statistics with contingent business, that is to say, with valuation and agency practice in their districts. This arrangement,

I know, would be highly disagreeable to the farmers generally; they would feel that they themselves and their affairs were continually under the eye of a man who might, at any time, be employed by their landlord as a valuer. The inconvenience of such an arrangement may be illustrated by the case of a house-tenant subject to perpetual visits from the agent of his landlord, who, without his consent, and frequently, without his knowledge, might enter every room in the house, and by these covert means become acquainted with the tenant's most private habits, and might base on this surreptitious information very unpalatable advice to the landlord respecting an improved rental.

Seeing that statesmen have of late confided in the honour of the agriculturists of Scotland for true statistical returns, the English agriculturists may well object to have this class of statistical agents forced upon them.

Whatever may be the fate of the plans hitherto proposed for collecting agriculturist statistics, we may at least congratulate each other on the birth of agricultural statistics in Scotland, and on the prospects of their extension to the entire kingdom.

Before I conclude this paper I would ask the serious attention of the Society to an important matter which seems naturally to grow out of the consideration of agricultural statistics. I mean the education of our agriculturists. With the exception of that portion of it immediately under the control of our agriculturists, the press of the kingdom has been, and is, in the constant habit of representing our agriculturists as an ignorant, prejudiced, and subservient body of men, and yet scarcely any efforts have been made to enlighten them. No public man has, I believe, up to this hour, so familiarly and freely expounded the fundamental purposes of statistics and their direct reference to every farmer's business concerns, as to convince them of their utility and necessity.

With the exception of our agricultural societies, the agriculturists have no means for acquiring knowledge at all; and if the great majority of them are ignorant and prejudiced, it is because these societies are not adapted to meet their necessities.

Having given much attention to this subject for many years, I conceive that the best educational means we possess would be found to be the agents for agricultural statistics; and I should propose, with the consent of the Government, to make the statistical agent in every parish an agent for the diffusion of information. He might also become the instrument of establishing local institutes, in which, by means of lectures and familiar oral instruction, useful information would be imparted to all the occupiers and cultivators of the soil. But as plans for the establishment and support of educational institutes adapted to the instruction of the rural population, would scarcely form a proper subject for the consideration of the Statistical Society, I must pass over what I might have said on this interesting subject, and conclude by expressing my hope that I have not exhausted the patience or wasted the time of the Statistical Society.

MISCELLANEA.

AGRICULTURAL RETURNS FOR IRELAND.

(Compiled from a Return by the Registrar-General.)

Return showing the extent of Land in Ireland under Crops in 1852 and 1853, distinguishing each Crop; also the Increase and Decrease thereof.

Crops.	1852.	1853.	Increase.	Decrease.
	Acre.	Acre.	Acre.	Acre.
Wheat	353,566	327,254	....	26,312
Oats	2,283,449	2,156,674	....	126,775
Barley, Bere, Rye, } Beans, and Peas}	339,591	349,017	9,426	....
Potatoes	876,532	897,774	21,242	....
Turnips	356,790	399,335	42,545	....
Other Green Crops	121,565	120,561	....	1,004
Flax	137,008	174,423	37,415	....
Meadow and Clover	1,270,713	1,270,309	....	404
Total	5,739,214	5,695,347	....	43,867*

* After deducting increase.

Return showing the extent of Land under Crops in Leinster in 1852 and 1853, distinguishing each Crop; also the Increase and Decrease thereof.

Crops.	1852.	1853.	Increase.	Decrease.
	Acre.	Acre.	Acre.	Acre.
Wheat	146,515	125,900	....	20,615
Oats	642,054	596,928	....	45,126
Barley, Bere, Rye, } Beans, and Peas}	137,572	143,493	5,921	....
Potatoes	192,656	178,424	....	14,232
Turnips	96,042	113,593	17,551	....
Other Green Crops	43,210	39,860	....	3,350
Flax	4,433	4,498	65	....
Meadow and Clover	485,150	480,904	....	4,246
Total	1,747,632	1,683,600	....	64,032*

* After deducting increase.

Return showing the extent of Land under Crops in Munster in 1852 and 1853, distinguishing each Crop; also the Increase and Decrease thereof.

Crops.	1852.	1853.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Wheat	139,694	123,241	....	11,453
Oats	426,045	405,755	....	20,290
Barley, Bere, Rye, } Beans, and Peas}	120,859	126,680	5,821	....
Potatoes	242,988	235,021	....	7,967
Turnips	114,748	129,284	14,536	....
Other Green Crops.....	30,728	30,999	271	....
Flax	4,179	5,219	1,040	....
Meadow and Clover	361,517	369,883	8,366	....
Total	1,440,758	1,431,082	....	9,676*

* After deducting increase.

Return showing the extent of Land under Crops in Ulster in 1852 and 1853, distinguishing each Crop; also the Increase and Decrease thereof.

Crops.	1852.	1853.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Wheat	49,140	53,053	3,913	....
Oats	914,252	854,925	....	59,327
Barley, Bere, Rye, } Beans, and Peas}	54,608	51,788	....	2,820
Potatoes	278,637	299,495	20,858	....
Turnips	107,259	114,199	6,940	....
Other Green Crops.....	29,018	30,323	1,305	....
Flax	125,175	160,168	34,993	....
Meadow and Clover	284,755	282,295	....	2,460
Total	1,842,844	1,846,246	3,402*	....

* After deducting decrease.

Return showing the extent of Land under Crops in Connaught in 1852 and 1853, distinguishing each Crop; also the Increase and Decrease thereof.

Crops.	1852.	1853.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Wheat	18,217	20,060	1,843	....
Oats	301,098	299,066	....	2,032
Barley, Bere, Rye, } Beans, and Peas}	26,552	27,056	504	....
Potatoes	162,251	184,834	22,583	....
Turnips	38,741	42,259	3,518	....
Other Green Crops.....	18,609	19,379	770	....
Flax	3,221	4,538	1,317	....
Meadow and Clover	139,291	137,227	....	2,064
Total	707,980	734,419	26,439*	....

* After deducting decrease.

Return showing the extent of Land under Crops in each Province in Ireland in 1852 and 1853, also the Increase or Decrease thereof.

Provinces.	1852.	1853.	Increase.	Decrease.
	Acre.	Acre.	Acre.	Acre.
Leinster	1,747,632	1,683,600	....	64,032
Munster	1,440,758	1,431,082	....	9,676
Ulster	1,842,844	1,846,246	3,402	....
Connaught	707,980	734,419	26,439	....
Total	5,739,214	5,695,347	....	43,867*

* After deducting increase.

Return showing the extent of Land under Cereal Crops in each Province in Ireland in 1852 and 1853, distinguishing each Crop.

Provinces.	Wheat.		Oats.		Barley, Bere, Rye, Beans, and Peas.		Meadow and Clover.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acre.	Acre.	Acre.	Acre.	Acre.	Acre.	Acre.	Acre.
Leinster ..	146,515	125,900	642,054	596,928	137,572	143,493	485,150	480,904
Munster ..	139,694	128,241	426,045	405,755	120,859	126,680	361,517	369,883
Ulster	49,140	53,053	914,252	854,925	54,608	51,788	284,755	282,295
Connaught.	18,217	20,060	301,098	299,066	26,552	27,056	139,291	137,227
Total ..	353,566	327,254	2,283,449	2,156,674	339,591	349,017	1,270,713	1,270,309

Return showing the extent of Land under Green Crops in each Province in Ireland in 1852 and 1853, distinguishing each Crop.

Provinces.	Potatoes.		Turnips.		Other Green Crops.		Flax.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acre.	Acre.	Acre.	Acre.	Acre.	Acre.	Acre.	Acre.
Leinster	192,656	178,424	96,042	113,593	43,210	39,860	4,433	4,498
Munster	242,988	235,021	114,748	129,284	30,728	30,999	4,179	5,219
Ulster	278,637	299,495	107,259	114,199	29,018	30,323	125,175	160,168
Connaught..	162,251	184,834	38,741	42,259	18,609	19,379	3,221	4,538
Total	876,532	897,774	356,790	399,335	121,565	120,561	137,008	174,423

Return showing the extent of Land under Crops in each County in Leinster in 1852 and 1853; also the Increase or Decrease thereof.

Counties.	1852.	1853.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Carlow.....	86,552	84,422	....	2,130
Dublin.....	107,452	101,987	....	5,465
Kildare.....	141,680	140,837	....	843
Kilkenny.....	192,096	183,913	....	8,183
King's.....	139,065	132,098	....	6,967
Longford.....	84,124	82,544	....	1,580
Louth.....	112,483	109,889	....	2,594
Meath.....	215,157	203,528	....	11,629
Queen's.....	153,100	151,656	....	1,444
Westmeath.....	132,697	127,214	....	5,483
Wexford.....	257,382	247,510	....	9,872
Wicklow.....	125,844	118,002	....	7,842
Total	1,747,632	1,683,600	....	64,032

Return showing the extent of Land under Crops in each County in Munster in 1852 and 1853; also the Increase or Decrease thereof.

Counties.	1852.	1853.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Clare.....	171,033	165,384	....	5,649
Cork.....	492,883	488,787	....	4,096
Kerry.....	145,362	151,275	5,913	....
Limerick.....	195,191	197,572	2,381	....
Tipperary.....	313,790	310,264	....	3,526
Waterford.....	122,449	117,800	....	4,649
Total	1,440,758	1,431,082	....	9,676*

* After deducting increase.

Return showing the extent of Land under Crops in each County in Ulster in 1852 and 1853; also the Increase or Decrease thereof.

Counties.	1852.	1853.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Antrim.....	236,377	236,576	199	....
Armagh.....	170,897	171,301	404	....
Cavan.....	173,174	176,591	3,417	....
Donegal.....	236,889	236,090	....	799
Down.....	317,007	308,083	....	8,924
Fermanagh.....	105,565	108,163	2,598	....
Londonderry.....	175,785	174,887	....	898
Monaghan.....	150,782	152,404	1,622	....
Tyrone.....	276,368	282,151	5,783	....
Total	1,842,844	1,846,246	3,402*	....

* After deducting decrease.

Return showing the extent of Land under Crops in each County in Connaught in 1852 and 1853, also the Increase or Decrease thereof.

Counties.	1852.	1853.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Galway	229,421	235,168	5,747	....
Leitrim	82,409	84,695	2,286	....
Mayo	169,417	179,268	9,851	....
Roscommon.....	135,370	138,565	3,195	....
Sligo	91,363	96,723	5,360	....
Total	707,980	734,419	26,439	....

Return showing the extent of Land under Cereal Crops in each County in Leinster in 1852 and 1853, distinguishing each Crop.

Counties.	Wheat.		Oats.		Barley, Bere, Rye, Beans, and Peas.		Meadow and Clover.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Carlow.....	7,616	6,687	29,726	27,707	6,252	6,712	24,530	24,837
Dublin.....	7,295	8,283	28,997	27,393	5,360	5,623	46,021	43,776
Kildare	13,339	13,655	49,511	46,715	9,420	8,853	45,146	45,890
Kilkenny	33,198	24,988	62,588	64,002	10,774	11,622	45,462	44,479
King's	13,100	13,939	41,791	37,370	10,674	8,340	40,774	39,883
Longford	790	1,166	44,121	40,952	1,697	967	20,043	19,167
Louth	5,060	4,201	43,824	40,301	22,368	23,904	16,490	17,094
Meath	12,208	9,563	103,800	94,862	8,318	7,434	59,264	59,953
Queen's	18,931	18,874	36,968	35,397	11,656	11,222	49,507	49,665
Westmeath..	3,133	2,797	60,142	56,064	4,988	3,621	39,074	38,010
Wexford	26,774	17,014	97,315	88,218	41,234	49,730	44,060	44,882
Wicklow	5,071	4,733	43,271	37,947	4,831	5,465	54,779	53,268
Total	146,515	125,900	642,054	596,928	137,572	143,493	485,150	480,904

Return showing the extent of Land under Green Crops in each County in Leinster in 1852 and 1853, distinguishing each Crop.

Counties.	Potatoes.		Turnips.		Other Green Crops.		Flax.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Carlow.....	11,369	10,608	5,272	6,326	1,722	1,502	65	43
Dublin.....	11,191	7,460	3,653	4,579	4,934	4,871	1	2
Kildare	10,749	10,716	10,387	11,990	3,111	2,991	17	27
Kilkenny	25,972	22,045	9,934	13,135	4,073	3,561	95	81
King's	16,621	17,891	10,729	10,678	5,056	3,802	320	195
Longford	13,142	15,576	2,512	2,810	1,141	1,175	678	731
Louth	12,053	9,423	7,906	9,741	2,904	3,134	1,878	2,091
Meath	14,690	13,411	10,205	12,123	5,956	5,563	716	589
Queen's	20,545	19,619	12,443	14,606	2,984	2,259	66	14
Westmeath..	14,283	16,200	6,732	7,014	4,099	3,248	246	260
Wexford	30,299	25,603	11,592	15,355	5,762	6,247	346	461
Wicklow	11,742	9,842	4,677	5,236	1,468	1,507	5	4
Total	192,656	178,424	96,042	113,593	43,210	39,860	4,433	4,498

Return showing the extent of Land under Cereal Crops in each County in Munster in 1852 and 1853, distinguishing each Crop.

Counties.	Wheat.		Oats.		Barley, Bere, Rye, Beans, and Peas.		Meadow and Clover.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Clare	7,242	7,445	49,231	43,382	20,826	18,748	51,083	50,853
Cork	52,049	44,470	150,581	149,953	42,426	48,325	99,885	99,454
Kerry	1,637	1,931	31,942	35,920	14,463	12,873	52,461	56,176
Limerick	9,472	10,324	59,262	53,133	16,886	17,792	66,156	69,160
Tipperary....	43,027	42,125	98,292	89,883	18,396	17,756	75,712	78,170
Waterford ..	26,267	21,946	33,737	33,484	7,862	11,186	16,220	16,070
Total	139,694	128,241	426,045	405,755	120,859	126,680	361,517	369,883

Return showing the extent of Land under Green Crops in each County in Munster in 1852 and 1853, distinguishing each Crop.

Counties.	Potatoes.		Turnips.		Other Green Crops.		Flax.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Clare	28,298	31,240	10,478	9,664	3,017	3,045	908	1,007
Cork	92,055	82,286	41,683	50,024	12,494	11,884	1,710	2,391
Kerry	25,811	27,715	12,896	12,661	2,472	2,966	680	1,033
Limerick	24,915	27,830	14,051	15,015	4,137	3,969	312	349
Tipperary....	45,901	46,006	26,704	30,687	5,370	5,301	388	336
Waterford ..	26,008	19,944	8,936	11,233	3,238	3,834	181	103
Total	242,988	235,021	114,748	129,284	30,728	30,999	4,179	5,219

Return showing the extent of Land under Cereal Crops in each County in Ulster in 1852 and 1853, distinguishing each Crop.

Counties.	Wheat.		Oats.		Barley, Bere, Rye, Beans and Peas.		Meadow and Clover.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Antrim	6,263	7,636	101,352	95,171	6,117	5,850	55,608	55,742
Armagh	9,713	9,243	78,140	70,768	2,939	3,020	23,776	24,187
Cavan.....	650	650	97,840	89,929	4,772	2,883	32,360	34,921
Donegal.....	2,436	2,609	110,675	108,408	9,175	7,535	35,310	31,969
Down.....	21,416	22,920	149,838	131,858	16,156	19,424	36,752	33,280
Fermanagh....	1,072	1,118	43,334	41,101	4,303	3,156	32,784	34,130
Londonderry..	1,875	2,163	93,362	88,176	2,820	2,290	19,461	19,324
Monaghan	2,281	2,519	83,848	78,537	5,533	4,962	13,515	14,099
Tyrone	3,434	4,195	155,827	150,977	2,793	2,668	35,189	34,643
Total	19,140	53,053	914,252	854,925	54,608	51,788	284,755	282,295

Return showing the extent of Land under Green Crops in each County in Ulster in 1852 and 1853, distinguishing each Crop.

Counties.	Potatoes.		Turnips.		Other Green Crops.		Flax.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Antrim	40,333	43,550	14,401	13,935	2,985	3,437	9,318	11,255
Armagh	30,078	31,558	8,039	8,804	3,616	4,193	14,596	19,528
Cavan	22,714	27,734	4,041	4,528	3,231	3,840	7,566	12,106
Donegal	37,331	39,123	18,155	18,647	2,203	2,189	21,604	25,610
Down	44,358	42,088	22,784	25,382	6,044	6,195	19,659	26,936
Fermanagh...	13,594	16,927	5,407	5,508	2,534	2,232	2,537	3,991
Londonderry	27,913	29,749	11,331	12,231	1,877	1,735	17,146	19,219
Monaghan ...	22,368	23,926	6,804	8,305	2,564	2,664	13,833	17,392
Tyrone	39,948	44,840	16,297	16,859	3,964	3,838	18,916	24,131
Total	278,637	299,495	107,259	114,199	29,018	30,323	125,175	160,168

Return showing the extent of Land under Cereal Crops in each County in Connaught in 1852 and 1853, distinguishing each Crop.

Counties.	Wheat.		Oats.		Barley, Bere, Rye, Beans, and Peas.		Meadow and Clover.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Galway	12,664	13,817	85,511	83,840	14,509	15,751	47,511	45,780
Leitrim	226	238	31,095	29,516	622	516	26,716	27,127
Mayo	3,244	3,263	79,587	81,451	7,574	7,262	17,036	17,904
Roscommon	1,184	1,338	63,443	61,951	939	780	31,745	30,299
Sligo	899	1,404	41,462	42,308	2,908	2,747	16,283	16,117
Total	18,217	20,060	301,098	299,066	26,552	27,056	139,291	137,227

Return showing the extent of Land under Green Crops in each County in Connaught in 1852 and 1853, distinguishing each Crop.

Counties.	Potatoes.		Turnips.		Other Green Crops.		Flax.	
	1852.	1853.	1852.	1853.	1852.	1853.	1852.	1853.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Galway	41,366	46,134	16,279	18,288	11,035	10,764	546	794
Leitrim	19,453	22,601	1,986	1,635	1,496	1,746	815	1,316
Mayo	46,547	53,412	11,903	12,308	2,626	2,470	900	1,198
Roscommon	31,885	36,124	3,726	4,900	2,076	2,638	372	535
Sligo	23,000	26,563	4,847	5,128	1,376	1,761	588	695
Total	162,251	184,834	38,741	42,259	18,609	19,379	3,221	4,538

AGRICULTURAL RETURNS.—SCOTLAND.

[Compiled from a Return by the Highland Society of Scotland.]

Number of Acres under Crops in Three Counties in Scotland, in May, 1853.

Crops.	Counties.			Total.
	Roxburgh.	Haddington.	Sutherland.	
	Acres.	Acres.	Acres.	Acres.
Wheat	5,181 $\frac{3}{8}$	15,339 $\frac{3}{8}$	627 $\frac{1}{4}$	21,148 $\frac{1}{8}$
Barley	14,613 $\frac{3}{8}$	12,809 $\frac{3}{8}$	3,682	31,107 $\frac{1}{8}$
Oats	28,862 $\frac{1}{2}$	16,802	6,121 $\frac{1}{4}$	51,785 $\frac{1}{2}$
Rye	14	46 $\frac{1}{2}$	8 $\frac{3}{4}$	69 $\frac{1}{4}$
Beans and Peas	1,642 $\frac{3}{8}$	4,809	89 $\frac{3}{4}$	6,541 $\frac{1}{8}$
Vetches	380 $\frac{1}{2}$	1,011 $\frac{1}{4}$	139 $\frac{1}{2}$	1,532
Turnips	23,809	16,260	2,212 $\frac{1}{2}$	42,281 $\frac{1}{2}$
Potatoes	1,454 $\frac{1}{2}$	4,246 $\frac{1}{2}$	2,279 $\frac{1}{2}$	7,981 $\frac{1}{2}$
Mangold	16 $\frac{1}{2}$	48 $\frac{1}{4}$	..	64 $\frac{3}{4}$
Carrots	6 $\frac{1}{2}$	107	1 $\frac{1}{2}$	114 $\frac{1}{2}$
Cabbage	10 $\frac{1}{2}$	15 $\frac{1}{2}$	2	28 $\frac{1}{2}$
Flax	2 $\frac{1}{2}$	..	$\frac{1}{2}$	2 $\frac{1}{2}$
Turnip Seed	43 $\frac{1}{2}$	157 $\frac{1}{2}$	1	202 $\frac{1}{2}$
Alternate Grasses	44,558 $\frac{1}{2}$	26,885	4,977 $\frac{1}{4}$	76,420 $\frac{1}{2}$
Improved Permanent } Grass Inclosures.. }	23,658 $\frac{1}{2}$	6,228 $\frac{1}{2}$	1,779 $\frac{1}{2}$	31,666 $\frac{1}{2}$
Irrigated Meadows....	923 $\frac{1}{4}$	87	38 $\frac{1}{4}$	1,050 $\frac{1}{2}$

Number of Acres not in Crop in Three Counties in Scotland, in May, 1853.

	Counties.			Total.
	Roxburgh.	Haddington.	Sutherland.	
	Acres.	Acres.	Acres.	Acres.
Bare Fallow	966 $\frac{1}{2}$	2,127 $\frac{1}{4}$	23	3,116 $\frac{3}{4}$
Sheep Walks	186,895 $\frac{1}{10}$	28,630 $\frac{1}{4}$	599,710 $\frac{3}{4}$	815,237 $\frac{1}{10}$
Houses, Gardens, } Roads, Fences, &c. }	4,900 $\frac{1}{4}$	2,586 $\frac{1}{2}$	2,290 $\frac{1}{2}$	9,777 $\frac{3}{4}$
Woods	17,679 $\frac{1}{2}$	9,313 $\frac{3}{4}$	10,812 $\frac{3}{4}$	37,806
Waste	3,320 $\frac{1}{2}$	1,660 $\frac{1}{4}$	176,104 $\frac{1}{4}$	181,085 $\frac{1}{2}$

Amount of Stock in Three Counties in Scotland, in May, 1853.

	Counties.			Total.
	Roxburgh.	Haddington.	Sutherland.	
Horses	4,975	4,450	2,794	12,219
Milk Cows	4,762	2,377	6,547	13,686
Other Cattle	12,658	7,576	6,015	25,679
Ewes	226,894	36,979	97,666	361,539
Tups and Wethers	51,869	29,597	70,504	151,970
Swine	4,607	5,580	1,310	11,497

Number of Imperial Acres in Three Counties in Scotland.

	Counties.			Total.
	Roxburgh.	Haddington.	Sutherland.	
Total Number of Imperial Acres	358,943 $\frac{1}{2}$	149,173 $\frac{1}{2}$	810,903 $\frac{1}{4}$	1,319,020 $\frac{3}{8}$
Number of Imperial Acres Arable	146,818 $\frac{1}{2}$	107,269 $\frac{1}{2}$	22,022 $\frac{1}{2}$	276,110 $\frac{1}{2}$

IRELAND.

Statistics of Sales in the Counties of Galway and Mayo, from the date of the First Sale under the Incumbered Estates Commission, 19th February, 1850, up to and for 10th May, 1854. Communicated by JOHN LOCKE, Esq., Auction Office, Incumbered Estates Commission, Ireland.

TABLE I.

	Total Number of Purchasers.	Total Amount of Purchase Money.			Total Acreage.			Total Acreage excepting Water.
		£	s.	d.	Λ.	R.	P.	Acres.
Galway.....	69	675,063	0	0	289,746	1	39	1,476,324
Mayo	79	347,287	10	3	130,201	2	25	1,306,906
	148	1,022,350	10	3	419,948	0	24	2,783,230

TABLE II.

Showing the Proportion of British Investments contained in Table I., from 10th May, 1852, the date of the First British Purchase, to and for 10th May, 1854, being exactly Four Years.

	Number of Purchasers.	Amount of Purchase Money.			Acreage.		
		£	s.	d.	Λ.	R.	P.
Galway.....	32	592,768	0	0	260,685	1	1
Mayo	27	174,380	0	0	101,700	2	35
	59	767,148	0	0	362,385	3	36

Note.—The preponderance of acreage in Galway is accounted for by the sale of the Martin Estate to the Law Life Insurance Company.

From the above tables, which I have carefully compiled from the records in this office, it appears that in the brief interval of four years, one-sixth of the area of these two counties, comprising the least known and most neglected districts in Ireland, has passed from a totally incapacitated proprietary into the possession of independent capitalists, two-fifths of whom are English and Scotch, and whose proportion as to money and acreage is fully two-thirds; indeed, this proportion is rather under rated, as there have been numerous sub-sales and transfers, made outside this court, not included in my estimate, as I had no accurate means of ascertaining their number and amount; English and Scotch farmers, too, have settled on many of the estates. And though, in some instances, English capitalists

are impatient at not having obtained *immediate* high returns for their investments, yet the disappointment is traceable solely to their own want of judgment and experience; and the improvement of agriculture and furnishing of estates are rapidly progressing throughout the regions of the far west.

While expressing respectful sympathy for the dispossessed landlords, many of them useful and public-spirited men, it is impossible not to be struck with the many and important benefits accruing to this country from the circumstance of those counties—in which the proprietors were most enthralled by incumbrances, the population least enlightened, land, minerals, manufactures, fisheries, commerce, all neglected—becoming so remarkably and indissolubly linked with the enterprise and capital of the sister island. And if the resources of Connaught could but be opened up by a great avenue from the centre of Ireland northward, and a transverse line connecting Galway with Belfast, the industrial capital of Ireland, there can be no doubt that in a few years this Ultima Thulé of Ultima Thulé itself will become a prosperous and fruitful province.

But amid evidences of progress apparent on every side, a difficulty, that could not have been anticipated a few years since, is now occasionally experienced, that is, deficiency in the supply of labour in consequence of emigration. The great question of over-population, or how to get rid of the (*assumed*) excess beyond the productive powers of the soil to sustain, which has occupied so many Parliamentary Committees, and puzzled so many political sociologists, is now more than solved by circumstances beyond legislative control. Emigration, however, when prevailing beyond a certain limit, tends to its own remedy, by raising the wages of labour and emptying the workhouses at home; while English, Scotch, and Ulster farmers are gradually settling upon the forsaken tracts of the West, sowing again the seeds of hope, and invigorating industry by the intermixture of a more energetic race.

PROCEEDINGS OF THE STATISTICAL SOCIETY.

Third Ordinary Meeting.

Monday, the 16th of January, 1854.

The Rev. E. Wyatt-Edgell, V.P., in the Chair.

The following gentlemen were elected Fellows of the Society:—

J. R. Bedford, Esq.

John Locke, Esq., A.B.

Richard Hodgson, Esq.

Thomas Walker, Esq., B.A.

The following Paper was read:—

“Contribution to the Natural History of the New Zealand Race of Men; being observations on their Stature, Weight, Size of Chest, and Physical Strength.” By A. S. Thomson, M.D., Surgeon, 58th Regt.

*Fourth Ordinary Meeting.**Monday, the 20th of February, 1854.*

The Right Hon. Lord Overstone in the Chair.

The following gentlemen were elected Foreign Honorary Members of the Society :—

M. le Baron de Czoernig	M. de Baumhauer
M. F. W. B. von Hermann	M. d'Avila
M. Alfred Legoyt	M. Ernest Engel
M. Charles Mittermaier	M. Bernardin Bertini
M. C. G. Asher	M. Marc d'Espine

The undermentioned gentlemen were elected Fellows of the Society :—

W. R. Botham, Esq.	J. W. Freshfield, Esq.
G. W. Callender, Esq.	William Tayler, Esq.

The following Paper was read :—

"On Agricultural Statistics." By Samuel Paull, Esq.

*Fifth Ordinary Meeting.**Monday, the 20th of March, 1854.*

Sir J. P. Boileau, Bart., F.R.S., in the Chair.

Signor Fabrizio Fabiani was elected a Corresponding Member of the Society.

Samuel Paull, Esq., was elected a Fellow of the Society.

The following Paper was read :—

"On the Relation of the Price of Wheat to the Revenue derived from Customs and Excise Duties." By Dr. Guy.

*Sixth Ordinary Meeting.**Monday, the 10th of April, 1854.*

The Right Hon. Holt Mackenzie, V.P., in the Chair.

W. H. Ashurst, Esq., jun., was elected a Fellow of the Society.

The following Paper was read :—

"On the Movement of the Population; Mortality and Fatal Diseases in London in the last Fourteen Years." By John Angus, Esq.

*Seventh Ordinary Meeting.**Monday, the 15th of May, 1854.*

Sir J. P. Boileau, Bart., V.P., F.R.S., in the Chair.

Signor Flechia, Librarian and Keeper of the Archives of the Senate of the kingdom of Sardinia, was elected a Corresponding Member of the Society.

Henry Ashworth, Esq., was elected a Fellow of the Society.

The following Paper was read :—

"A Statistical and Historical View of the Statute Law of the Realm, and of the number of Statutes passed in each Reign from the earliest recorded period to the present time." By William Tayler, Esq., of the Middle Temple.

COINAGE.

Amount of Gold, Silver, and Copper Monies Coined at the Royal Mint in each Year from 1840 to 1853, both inclusive.

Years.	Gold.	Silver.	Copper.	Total.
	£	£	£	£
1840	Nil.	216,414	3,136	219,550
1841	378,472	96,175	8,848	483,495
1842	5,977,051	192,852	1,764	6,171,667
1843	6,607,849	276,606	10,080	6,894,535
1844	3,563,049	626,670	7,246	4,197,865
1845	4,244,608	647,658	6,944	4,899,210
1846	4,334,911	559,548	6,496	4,900,955
1847	5,158,440	125,730	8,960	5,293,130
1848	2,451,999	35,442	2,688	2,490,129
1849	1,177,955	119,592	1,792	2,299,339
1850	1,491,836	129,096	448	1,621,380
1851	4,400,411	87,868	3,584	4,491,863
1852	8,742,270	189,596	4,312	8,936,178
1853	11,952,391	701,544	10,190	12,664,125

NATIONAL DEBT.

Capital of National Debt in each Year from 1840 to 1853, both inclusive.

Years.	Funded.	Unfunded.	Total.
	£	£	£
1840	766,371,725	21,076,350	787,448,075
1841	772,530,758	18,343,850	790,874,608
1842	773,068,340	18,182,100	791,250,440
1843	772,169,092	18,407,300	790,576,392
1844	769,193,645	18,404,500	787,598,145
1845	766,672,822	18,380,200	785,053,022
1846	764,608,284	18,310,700	782,918,984
1847	772,401,851	17,946,500	790,348,351
1848	774,022,638	17,786,700	791,809,338
1849	773,168,317	17,758,700	790,927,017
1850	769,272,562	17,756,600	787,029,162
1851	765,126,582	17,742,800	782,869,382
1852	761,622,704	17,742,500	779,365,204
1853	754,893,401	16,029,600	770,923,001

Balances in the Exchequer at the end of each Year from 1840 to 1853, both inclusive.

	£		£
1840	3,858,465	1847	8,457,691
1841	3,653,810	1848	8,105,561
1842	1,390,059	1849	9,748,539
1843	4,716,019	1850	9,245,676
1844	6,254,113	1851	8,381,637
1845	8,452,090	1852	8,841,822
1846	9,131,282	1853	4,455,230

THE MARRIAGES, BIRTHS, AND DEATHS,

REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.

The Marriages for the Quarter ended September, 1853, and the Births and Deaths for the Quarter ended December, 1853,

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

This return comprises the births and deaths registered by 2,191 registrars in all the districts of England during the Autumn quarter ended December 31st, 1853; and the marriages in 12,039 churches or chapels, about 3,451 registered places of worship unconnected with the Established Church, and 625 superintendent registrars' offices, in the quarter that ended September 30th, 1853.

The return of marriages is not complete; but the defects are inconsiderable, and approximative numbers have been supplied from the records of previous years.

The marriages in the quarter that ended on September 30th are not only above the average, but the proportion to the population exceeds any of the proportions previously recorded. The births in the quarter that ended on December 31st are also above the average. The mortality, particularly in towns and cities, is high, and exceeds the mortality in every autumn quarter since 1843, except in 1846, 1847, when the potato disease commenced, and diarrhoea and influenza became epidemic.

The returns, therefore, present a mixed result: the marriages indicate that the circumstances of the great body of the people were considered by them prosperous. But the public health has suffered, and is still over the coming year threatened by Asiatic cholera. All the measures of improvement should therefore be accelerated.

It will be a happy circumstance if the germs of disease which first affected the potato and the vine, and other plants, in the year of high temperature 1846, and have

Marriages, Births, and Deaths, returned in the Years 1841-53 and in the Quarters of those Years.

YEARS.....	1841	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851*	1852	1853
Marriages	122496	118425	123818	132249	143743	145664	135815	138230	141883	152744	154206	158439	...
Births	512158	517739	527325	540763	543521	572625	539965	563059	578159	593422	615865	621171	612311
Deaths	343847	349519	346445	356933	349366	390315	323304	399833	410839	368995	395171	407938	421775
MARRIAGES.													
Quarters ended the last day of													
March	24447	25860	25285	26387	29551	31417	27480	28398	28429	30567	32724	32933	35014
June	32551	30048	31113	34268	35300	37111	35197	34721	35844	39204	38635	40007	40335
September	29397	27288	28847	31675	35003	35070	32439	32995	33874	37636	37316	38291	39786
December	36101	35629	35573	39919	43889	42066	40729	42116	48736	45337	45531	47208	...
BIRTHS.													
March	133720	135615	136837	143578	143086	145168	146453	139736	153772	144551	157286	161776	161598
June	129884	131096	131279	136941	136853	149150	139072	149760	153693	155865	159073	159436	158718
September	123868	123296	128161	130078	132369	138718	127173	140359	135223	146911	150594	151193	147581
December	124686	124732	131048	130166	131219	139349	127267	133204	135471	146095	148912	152066	144444
DEATHS.													
March	99069	96314	94926	101024	104664	89484	119672	120032	105870	98430	105306	106682	118241
June	86131	86538	87234	85337	89149	90231	106718	99727	102153	92871	99168	100813	107861
September	75444	82339	76792	79708	74872	101663	93435	87638	135227	85849	91381	100497	92332
December	83204	81328	87493	90864	80681	108937	103179	92436	97589	91845	99019	99946	103341

* The numbers up to 1851 have appeared in the Annual Reports.

led to the loss of so much food, should be partially destroyed by the severe cold that set in at the close of the year.

MARRIAGES.—79,572 persons were married during the quarter ended September 30th, 1853,—a number considerably exceeding that of any corresponding quarter since the Registration Act came into operation in 1837, and 2,990 more than were married in the same period of 1852, when the large number of 76,582 persons were married.

The increase was spread over each of the eleven divisions of England and Wales, and the only counties in which a decrease is observable are Hampshire, Berkshire, Northamptonshire, Huntingdonshire, Bedfordshire, Dorsetshire, Devonshire, Somersetshire, Leicestershire, Rutlandshire, Derbyshire, Cheshire, and Westmorland. Marriages increased in most of the important seats of manufactures and commerce, but an augmented number is more particularly apparent in the mining districts of Cornwall and South Wales, of Staffordshire and Durham. In the September quarter of the last five years, the number of marriages was, in Truro, 76, 90, 80, 91, and 134; in Redruth, 101, 95, 127, 112, and 143; in Wolverhampton, 188, 256, 287, 289, and 313; Walsall, 57, 87, 97, 88, and 107; West Bromwich, 157, 191, 158, 179, and 225; Dudley, 265, 313, 294, 326, and 430; Stockton, 104, 115, 107, 126, and 132; Sunderland, 161, 193, 191, 197, and 240; South Shields, 72, 74, 104, 90, and 109; and in the districts of Cardiff, Merthyr Tydfil, Bridgend, and

England†:—Annual Rate, per cent., of Marriage, Birth, and Death, during the Years 1843-53, and the Quarters of those Years.

Estimated Population of England in thousands in the middle of each Year.....	16318	16516	16716	16919	17124	17331	17541	17754	17977	18195	...	18195
YEARS	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	Mean, 1843-52	1853
Marriages.....	·759	·801	·860	·861	·793	·798	·809	·860	·858	·881	·828	...
Births	3·232	3·274	3·251	3·385	3·153	3·249	3·296	3·343	3·426	3·472	3·308	3·406
Deaths	2·123	2·161	2·090	2·307	2·472	2·307	2·513	2·078	2·198	2·269	2·252	2·346
MARRIAGES.												
Quarters ended the last day of												
March	·632	·644	·721	·757	·655	·661	·661	·702	·742	·730	·691	·776
June	·767	·834	·849	·882	·826	·805	·822	·888	·864	·883	·842	·891
September	·701	·760	·830	·822	·751	·755	·766	·840	·823	·834	·788	·867
December.....	·934	·955	1·038	·983	·910	·961	·986	1·010	1·001	1·038	·985	...
BIRTHS.												
March	3·420	3·507	3·491	3·498	3·488	3·252	3·575	3·321	3·567	3·585	3·470	3·581
June	3·234	3·334	3·291	3·551	3·265	3·474	3·523	3·530	3·557	3·516	3·428	3·507
September	3·114	3·123	3·140	3·251	2·945	3·211	3·056	3·281	3·321	3·294	3·174	3·215
December.....	3·174	3·115	3·103	3·256	2·988	3·038	3·053	3·253	3·274	3·343	3·155	3·176
DEATHS.												
March	2·373	2·467	2·554	2·157	2·850	2·794	2·462	2·261	2·388	2·364	2·467	2·620
June	2·149	2·077	2·144	2·144	2·506	2·313	2·341	2·107	2·221	2·227	2·223	2·383
September	1·866	1·913	1·776	2·382	2·163	2·005	3·057	1·917	2·017	2·190	2·129	2·012
December.....	2·119	2·175	1·908	2·545	2·389	2·108	2·199	2·045	2·177	2·197	2·186	2·272

† The table may be read thus, without reference to the decimal points:—In the year 1848, to 100,000 of the population of England there were 798 marriages, 3,249 births, and 2,307 deaths registered. The annual rates of marriage in each of the four quarters were ·661, ·805, ·755, and ·961 per cent.; the rates of death 2·794, 2·313, 2·005, and 2·108 per cent. In reading the population on the first line add three ciphers (000). The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the two last quarters of the year 92 days. For this inequality a correction has been made in the calculation.

Neath, 360, 437, 424, 501, and 580 marriages were celebrated in the September quarter of the past five years. In Preston, the number of marriages (252) is slightly in excess of the number (244) recorded in the third quarter of the previous year, although fewer than in the corresponding periods of 1850 and 1851, when the numbers reached 281 and 277 respectively. On an average of the corresponding quarters of 10 years (1843-1852), the number of marriages was at the annual rate of 788 to every 100,000 persons living; the proportion for the same period of 1853 was 867 to 100,000 persons living.

BIRTHS.—144,441 births were registered in the last three months of the year. This number, though slightly above the average, shows a considerable diminution on the numbers registered in the same period of the two preceding years (148,912 and 152,066 respectively). This decrease is observable in nearly the whole of the country; the only counties which exhibit an increase in the number of births being the Metropolitan and Extra-metropolitan parts of Surrey, Huntingdon, Staffordshire, and South Wales.

INCREASE OF POPULATION.—The number of births registered during the last quarter being 144,441, and the number of deaths 103,311, there remains a balance of 41,103 as the natural increase of the population during that period. Large numbers of persons are still attracted to the Australian Colonies, as well as to America and other places, although a small decrease in the emigration is perceptible on the numbers of the corresponding quarter of 1852. From the four English ports which make returns, 50,457 persons emigrated during the last three months; namely, from London, 6,810; Plymouth, 2,851; Liverpool, 37,732; and Southampton, 3,064. In addition, 1,795 persons sailed from the ports of Glasgow and Greenock, and 2,431 from Irish ports, giving a total of 54,683* for the United Kingdom, against 55,315 during the last quarter of 1852. It must be borne in mind, in any estimate of the increase of population, that the births and deaths refer only to England and Wales, and that of the emigrants leaving English ports a large though an unascertained number are of Irish birth.

PRICES OF PROVISIONS.—The chief articles of food have greatly risen in price since the three months ended December, 1852; wheat, which was then 40s. 5d. per quarter, has risen to 69s. 10d., being an increase of 73 per cent.; and at this higher price an average weekly sale of 79,002 quarters took place in the towns of England and Wales which make returns, against 111,224 quarters weekly when the price was 40s. 5d. Beef and mutton rose in price; and potatoes, which were 105s. per ton at the waterside market, Southwark, in December, 1852, rose to 150s. in the December quarter, 1853, being an augmentation in price equivalent to 43 per cent. The continued activity of trade and the increased rate of wages has enabled the labouring classes for the most part to cope with the dearth of provisions; but, in conjunction with the severity of the weather and the exorbitant price of fuel, it has been a season of trial, which has, however, been borne with exemplary patience and fortitude by those who were most exposed to its rigours.

The fall of snow, the low temperature, and the other meteorological phenomena of the quarter, are fully and ably described by Mr. Glaisher.

STATE OF THE PUBLIC HEALTH.—There died last quarter in England and Wales 103,341 persons. The period was unhealthy, and a greater number of lives was lost to the population than in any other autumnal quarter of the last thirteen years, with only two exceptions,—the fourth quarter of 1846, when the deaths rose to 108,937, and that of 1847, when they were 103,479. The annual mortality has been at the rate of 2.252 per cent. in the ten years of 1843-52; it was 2.186 in the last quarters of those years; and last quarter it was 2.272. Cold weather towards the close of the year thinned the ranks of both old and young, and the latter class have also suffered much from fever, especially scarlatina, in many parts of the country.

London makes a large contribution to this excess of mortality; for in the metropolitan division the deaths in October, November, and December, rose to 16,390,

* From a Return with which the Registrar-General has been favoured by the Emigration Commissioners.

which is more by 2,709 than took place in the same quarter of the previous year. In the last fourteen weeks of 1853, 17,390 persons died in London, and more than the usual proportion of these were carried off by zymotic diseases, (those of epidemic character), principally cholera, typhus, scarlatina, hooping-cough, and diarrhoea. Cholera and typhus killed almost equal numbers, viz., 728 and 724; scarlatina and hooping-cough were rival powers of destruction, for 668 and 667 are claimed as their respective shares; 565 deaths were caused by diarrhoea, besides 41 by dysentery. It is to be observed that these diseases, severally, not only produced more than the average number of deaths in this quarter, but showed a disposition to increase as the year drew to a close. In the summer months cholera was fatal in 137 cases, it rose to 728 in autumn; typhus (including continued fever, &c.,) rose in the same periods from 585 to 724; scarlatina from 397 to 668; and hooping-cough from 426 to 667. Diarrhoea forms an exception, having declined from 1,232 in the summer to 565 in the autumnal quarter. Croup nearly doubled its comparatively small rate of mortality, and measles also became more fatal towards the end of 1853.

The Average Prices of Consols, of Wheat, Meat, and Potatoes, also the Average Quantity of Wheat sold and imported Weekly, in each of the eight Quarters ended December 31st, 1853.

Quarters ended	Average Price of Consols (for Money.)	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase).		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.
			Average Number of Quarters weekly.		Beef.	Mutton.	
1852	£						
Mar. 31.	97 $\frac{1}{4}$	40s. 10d.	95,532	27,540	3 $\frac{1}{4}$ d.—5d. Mean 4 $\frac{1}{2}$ d.	3 $\frac{3}{4}$ d.—5 $\frac{3}{4}$ d. Mean 4 $\frac{3}{4}$ d.	60s.—80s. Mean 70s.
June 30.	99 $\frac{5}{8}$	40s. 10d.	87,949	54,675	3 $\frac{1}{4}$ d.—4 $\frac{3}{4}$ d. Mean 4d.	3 $\frac{3}{4}$ d.—5 $\frac{1}{4}$ d. Mean 4 $\frac{1}{2}$ d.	85s.—110s. Mean 97s. 6d.
Sept. 30.	100	41s. 2d.	78,712	67,912	3 $\frac{1}{4}$ d.—5d. Mean 4 $\frac{1}{2}$ d.	4d.—6d. Mean 5d.	80s.—100s. Mean 90s.
Dec. 31.	100 $\frac{5}{8}$	40s. 5d.	111,224	72,870	3d.—5d. Mean 4d.	4 $\frac{1}{4}$ d.—6 $\frac{1}{4}$ d. Mean 5 $\frac{1}{4}$ d.	90s.—120s. Mean 105s.
1853							
Mar. 31.	99 $\frac{5}{8}$	45s. 7d.	95,115	63,530	3 $\frac{3}{4}$ d.—5 $\frac{1}{4}$ d. Mean 4 $\frac{1}{2}$ d.	4 $\frac{3}{4}$ d.—6 $\frac{3}{4}$ d. Mean 5 $\frac{3}{4}$ d.	110s.—145s. Mean 127s. 6d.
June 30.	100 $\frac{5}{8}$	44s. 6d.	84,559	82,623	4d.—5 $\frac{3}{4}$ d. Mean 4 $\frac{7}{8}$ d.	5d.—6 $\frac{3}{4}$ d. Mean 5 $\frac{7}{8}$ d.	110s.—145s. Mean 127s. 6d.
Sept. 30.	97	51s. 10d.	86,087	120,020	4 $\frac{1}{4}$ d.—6d. Mean 5 $\frac{1}{4}$ d.	5d.—7 $\frac{1}{4}$ d. Mean 6 $\frac{1}{4}$ d.	110s.—125s. Mean 117s. 6d.
Dec. 31.	93 $\frac{5}{8}$	69s. 10d.	79,002	91,627	4d.—6d. Mean 5d.	4 $\frac{1}{4}$ d.—7d. Mean 5 $\frac{3}{8}$ d.	135s.—165s. Mean 150s.

Note.—The total number of quarters of wheat sold in England and Wales for the 13 weeks ended March 31st, 1852, was 1,241,921; for the 13 weeks ended June 30th, 1,143,339; for the 13 weeks ended September 30th, 1,023,251; for the 13 weeks ended December 31st, 1,445,906; for the 13 weeks ended March 31st, 1853, 1,236,493; for the 13 weeks ended June 30th, 1853, 1,099,261; for the 13 weeks ended September 30th, 1853, 1,119,128; and for the 14 weeks ended December 31st, 1853, 1,106,027. The total number of quarters entered for Home Consumption was, respectively, 358,024; 710,780; 882,850; 947,310; 825,886; 1,074,095; 1,560,255; and 1,191,149 (13 weeks).

Whilst the young suffered from their peculiar diseases, the old had their own maladies to contend with. The number of deaths at all ages from diseases of the respiratory organs (exclusive of phthisis and hooping-cough) were, in the fourteen weeks, 3,291. There died between 600 and 700 more than is usual in the same season. Bronchitis was fatal in 1,460 cases, pneumonia in 1,389, phthisis in 1,914. 15 persons in London suffered death from cold and the privation, from some cause, of necessities of life; 27 were the victims of their own intemperate habits. It is probable that want, in some cases, and vicious indulgence in spirits, in many others, produced disease, or carried it to a fatal issue, where the register does not reveal their operation.

In the last quarter large town populations were unhealthy, but, judging from the mortality, smaller towns and the inhabitants of the open country appear to have enjoyed as much health as usual. In 117 districts, comprising the chief towns, the rate of mortality per annum was 2·778 to 100 inhabitants; the annual mortality in ten autumn quarters (1843-52) was 2·634. In 507 districts, consisting chiefly of small towns and country parishes, the mortality was 1·911; the average was 1·965. Country Registrars refer, in their reports, to measles and other complaints prevailing among children.

Deaths in the Autumn Quarters.

	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	Total. 1843-52	1853
In 117 Districts, } comprising the } chief towns }	42608	44080	39293	53055	57925	46124	47685	45245	49282	49507	474804	54702
In 507 Districts, } comprising chiefly } small towns and } country parishes }	44885	46784	41388	55882	45554	46312	49909	46778	49966	50439	477897	48639
Total.....	87493	90864	80681	108937	103479	92436	97594	92023	99248	99946	952701	103341

Population, Deaths, and Mortality per cent. in the Autumn Quarters, 1843-53.

	Population Enumerated.		Deaths in 10 Autumn Quarters, 1843-52.	Annual Rate of Mortality of 10 Autumn Quarters, 1843-52.	Annual Rate of Mortality in the Autumn Quarter 1853.
	June 6-7th, 1841.	March 31st, 1851.			
In 117 Districts, com- } prising the chief } towns }	6,612,958	7,795,882	474,804	2·634	2·778
In 507 Districts, com- } prising chiefly small } towns and country } parishes }	9,301,190	10,126,886	477,897	1·965	1·911
All England	15,914,148	17,922,768	952,701	2·186	2·272

MORTALITY OF THE METROPOLIS.

A Table of the Deaths in London from all Causes, Registered in the December Quarters of the Four Years, 1850-53.

CAUSES OF DEATH.	Quarters ended Dec.,				CAUSES OF DEATH.	Quarters ended Dec.,			
	1850	1851	1852	1853		1850	1851	1852	1853
ALL CAUSES	12,544	13,004	13,448	17,900†	III. Scrofula	76	84	86	122
SPECIFIED CAUSES	12,443	13,850	13,302	17,165	Tubercles Mesenterica	183	196	167	245
I. Zymotic Diseases	2,706	3,137	2,851	4,256	Phthisis or Con- } sumption	1,455	1,737	1,602	1,914
Sporadic Diseases:					Hydrocephalus	298	373	304	345
II. Dropsy, Cancer, and } other Diseases of } uncertain or vari- } able Seat	564	574	598	707	IV. Cephalitis	122	113	111	151
III. Tubercular Diseases	2,012	2,300	2,219	2,626	Apoplexy	332	330	288	316
IV. Diseases of the Brain, } Spinal Marrow, } Nerves, and Senses } V. Diseases of the Heart } and Blood Vessels } VI. Diseases of the Lungs } and of the other } Organs of Respi- } ration	1,476	1,495	1,402	1,812	Paralysis	280	277	238	267
V. Diseases of the Heart } and Blood Vessels } VI. Diseases of the Lungs } and of the other } Organs of Respi- } ration	525	582	517	629	Delirium Tremens	38	33	27	25
VII. Diseases of the Stomach, Liver, and } other Organs of } Digestion	2,262	2,510	2,359	3,291	Cholera	1	1	1	3
VIII. Diseases of the Kid- } neys, &c.,	734	781	807	823	Epilepsy	70	75	118	117
IX. Childbirth, Diseases } of the Uterus, &c., } X. Rheumatism, Dis- } eases of the Bones } Joints, &c.,	153	160	168	200	Tetanus	24	2	4	3
XI. Diseases of the Skin, } Cellular Tissue, &c., } XII. Malformations	107	114	121	118	Insanity	41	47	29	45
XIII. Premature Birth and } Debility	108	99	112	106	Convulsions	155	139	174	191
XIV. Atrophy	299	297	323	477	V. Pericarditis	39	32	26	24
XV. Age	530	606	556	687	Aneurism	21	25	17	28
XVI. Sudden*	147	108	120	167	Disease of Heart, &c.,	465	525	474	577
XVII. Violence, Privation, } Cold, and Intem- } perance	487	524	576	728	VI. Laryngitis	32	45	49	54
I. Small Pox	101	339	74	60	Bronchitis	922	1,050	1,065	1,460
Measles	204	204	121	341	Pleurisy	31	59	35	44
Scarlatina	429	663	952	668	Pneumonia	946	1,053	1,036	1,389
Hooping Cough	424	286	316	667	Asthma	216	216	151	221
Croup	80	93	76	130	Disease of Lungs, &c.,	115	96	91	123
Thrush	39	33	27	44	VII. Teething	120	99	107	148
Diarrhoea	316	401	313	565	Quinsey	24	31	19	14
Dysentery	41	39	31	41	Gastritis	10	21	19	16
Cholera	23	15	14	738	Enteritis	41	69	99	94
Influenza	29	34	41	33	Peritonitis	48	68	51	50
Purpura and Scurvy	13	18	14	15	Ascites	25	32	33	42
Ague	3	0	5	4	Ulceration of Intes- } tines, &c.,	22	33	38	35
Remittent Fever	23	24	13	30	Hernia	29	29	41	30
Infantile Fever	15	12	11	13	Ileus	34	37	48	40
Typhus	619	770	634	724	Intussusception	10	8	11	10
Metria, or Puerperal } Fever, see Child- } birth	55	69	46	42	Stricture of the In- } testinal Canal	11	13	9	10
Rheumatism	14	21	24	19	Disease of Stomach, &c. } Disease of Pancreas } Hepatitis	65	79	77	84
Erysipelas	87	116	67	84	Jaundice	44	40	61	59
Syphilis	29	43	37	45	Disease of Liver	155	157	157	163
Noma or Canker, see } Mortification	4	11	5	3	Disease of Spleen	4	5	4	2
Hydrophobia	58	38	50	56	VIII. Nephritis	10	5	12	8
II. Hemorrhage	183	225	220	208	Nephria (or Bright's } Disease)	35	39	30	53
Abscess	25	20	20	35	Ischuria	3	5	4	3
Ulcer	18	8	14	16	Diabetes	17	12	16	15
Fistula	4	6	2	13	Disease of	6	7	12	8
Mortification	40	43	45	44	Cystitis	6	2	9	9
Cancer	219	223	228	325	Stricture of Urethra	12	17	0	15
Gout	17	11	10	10	Disease of Kidneys, &c. } IX. Paramenia	64	73	76	84
					Ovarian Dropsy	2	1	2	4
					Childbirth, see Metria } Disease of Uterus, &c. } X. Arthritis	62	59	60	68
					Rheumatism	34	40	43	31
					Disease of Joints, &c.,	1	3	8	4
					XI. Carbuncle	61	51	55	61
					Phlegmon	40	45	49	41
					Disease of Skin, &c. } XVII. Intemperance } Privation	3	9	10	18
					Want of Breast Milk, } see Privation and } Atrophy	18	8	1	4
					Neglect	17	15	20	27
					Cold, see Privation	0	7	2	9
					Poison	51	77	54	85
					Burns and Scalds	2	5	1	1
					Hanging, &c.,	22	28	26	30
					Drowning	49	60	66	85
					Fractures and Con- } tusions	54	55	93	73
					Wounds	59	58	108	113
					Other Violence	142	164	168	245
					Causes not specified	20	33	26	25
						11	12	11	20
						101	114	146	225

* Under the head of *sudden deaths* are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the coroner in vague terms, such as "found dead," "natural causes," &c., &c.

† The Weekly Returns of Births and Deaths in London for 1853 extend over a period of 53 weeks. The last 14 weeks, ended December 31st, constitute the December quarter in the above Table. An additional week was inserted in 1853 for the adjustment of the dates.

On the Meteorology of England and Scotland during the Quarter ending December 31st, 1853. By JAMES GLAISHER, ESQ., F.R.S., *Sec. of the British Meteorological Society.*

THE temperature, till 20th October, was 1.8° below its average, in the period from 21st October to 8th November it was 5.3° above, and from 9th November to the end of the year it was 4.8° below the average. The temperature of December was 7° below the average of the twelve preceding Decembers. During the period from 9th November there were several instances of very low temperatures; on some days the mean for the day was 10° , 11° , 12° , and in one case 13° below the respective averages. With the exception of the interval between 21st October and 8th November the weather has been cold throughout the quarter.

The maximum cold for the season, in the whole country, took place during the night common to December 28th and 29th. This cold extended from the most southern to the most northern station.

The reading of the barometer was low in October; it was very high in November. The excess of reading in November over that in October was nearly four-tenths of an inch at all places; it decreased by December in England, but still farther increased in Scotland.

The fall of rain was one-third above its average in October, and fell short of the average in November and December, except in Cornwall and Devonshire. The general deficiency for the quarter is about one inch.

Snow fell at a few places north of the parallel of 53° on 17th November; at places north of 51° on 24th November; and at the Islands of Jersey and Guernsey at the end of the year. It fell generally over England after the middle of December.

The direction of the wind has generally been a compound of the north or east, except in the interval from 21st October to 8th November, when it was mostly south-west.

The air has been drier than usual, particularly in December, in which month the difference of air and dew-point temperature, notwithstanding the low value of the former, was greater than usual, consequently the degree of humidity was low.

Fog was very prevalent in October and November, particularly between the parallels of latitude of 51° and 52° . In November it was more or less prevalent on twenty-eight days, and on some days extended all over the country. At times it was very dense within a band extending across the country between the above parallels of latitude. In December fog was most prevalent below the parallel of 53° and 54° .

The mean temperature of the air at Greenwich for the quarter ending November, constituting the three autumn months, was $49^{\circ}.4$, being $0^{\circ}.1$ above the average of eighty years.

Meteorological Table, Quarter ended December 31st, 1853.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of the Temperature.	Mean Monthly Range of the Temperature.	Range of Temperature in the Quarter.	WIND.		Mean Amount of Cloud.	RAVN.		Mean Degree of Humidity.
								Mean estimated Strength.	General Direction.		Number of Days on which it fell.	Amount collected.	
	in.	°	°	°	°	°	°	°				in.	
Jersey	29·640	47·0	70·0	25·0	8·7	27·4	45·0	2·5	N.E., W., & S.W.	5·8	40	6·4	0·866
Falmouth .....	....	47·9	68·0	25·0	11·9	29·7	43·0	1·6	N. & N.W.	6·3	53	12·9	....
Truro	29·591	47·1	64·0	23·0	11·3	99·3	41·0	1·1	E.N.E. & N.	6·8	64	12·5	0·838
Torquay .....	....	46·3	63·0	24·0	7·6	26·0	39·0	2·5	N. & S.W.	....	48	11·2	0·835
Newport	29·666	43·1	64·0	18·9	11·8	33·5	45·1	2·1	N.W., & S.E.	7·2	39	10·2	0·882
Worthing	29·645	44·2	60·2	22·5	6·7	....	37·7	1·6	Var.	6·0	44	9·3	0·888
Southampton .....	....	44·2	64·0	19·0	....	31·9	45·0	....	....	6·9	43	8·1	0·866
Clifton	29·658	42·0	62·5	10·7	11·1	35·3	51·8	0·6	Var.	6·7	49	7·4	0·896
Royal Observatory	29·677	42·3	67·0	18·0	12·0	34·4	49·0	....	N.E. & S.W.	7·7	50	6·5	0·916
Oxford	29·678	42·2	63·2	11·7	10·8	35·8	51·5	1·3	N.E. & S.W.	7·5	46	5·4	0·898
Aylesbury	29·650	42·5	68·0	10·5	12·5	38·8	57·5	0·4	N.E., W., & S.W.	7·4	39	5·8	0·911
Royston	29·681	40·9	65·6	13·5	10·3	....	52·1	....	Var.	6·9	....	....	0·920
Bedford	29·658	42·3	65·0	17·0	10·6	31·8	48·0	0·5	Var.	6·7	42	4·5	0·864
Norwich	29·632	43·5	64·0	17·0	10·4	30·7	47·0	0·9	Var.	7·2	44	5·8	0·895
Derby	29·720	42·1	68·0	15·0	....	36·7	53·0	....	N.E. & S.W.	....	50	5·4	0·929
Holkham	29·663	42·4	64·8	12·3	10·9	32·0	52·5	0·9	S., E., & W.	6·9	47	6·4	0·916
Nottingham .....	....	40·7	65·2	13·8	12·8	38·4	51·4	0·3	Var.	8·1	44	6·5	0·862
Gainsborough	29·664	41·7	62·0	10·5	8·8	33·5	51·5	0·2	Var.	5·7	43	5·5	0·897
Warrington	29·660	41·7	63·3	10·2	12·1	37·1	53·1	0·5	Var.	6·3	52	6·5	0·897
Liverpool	29·651	44·2	61·1	23·1	6·6	24·4	38·0	0·7	S. & S.E.	7·2	39	5·1	0·894
York	29·607	40·4	61·0	15·0	9·2	32·3	46·0	....	N.E., N., & S.	7·6	45	5·9	0·900
Durham	29·631	40·9	56·1	23·0	6·7	25·3	33·1	1·7	W.S., W., & N.	....	41	10·3	0·925
Newcastle	29·635	43·1	....	22·0	....	....	....	....	S.W. & N.W.	....	41	....	0·898
Dumino	29·610	40·8	59·0	18·0	9·6	30·3	41·0	1·9	S.W. & N.W.	5·1	44	11·5	0·849
Arbroath	29·615	40·5	61·0	21·0	10·9	30·3	41·0	0·9	Var.	7·0	45	8·5	0·870

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ended 5th April, 1853 and 1854; showing the Increase or Decrease thereof.—(Continued from page 88.)

[Compiled from the "London Gazette."]

Sources of Revenue.	Years ended 5th April.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,513,189	18,871,332	358,143	....
Excise	13,385,498	13,473,872	88,374	....
Stamps	6,429,025	6,494,938	65,913	....
Taxes.....	3,194,271	3,241,701	47,430	....
Property Tax	5,593,043	5,975,677	382,634	....
Post Office.....	1,045,000	1,104,000	59,000	....
Crown Lands.....	252,000	395,888	143,888	....
Miscellaneous	271,514	167,544	....	103,970
Total Ordinary Revenue	48,683,540	49,724,952	1,145,382	103,970
Imprest and other Moneys,	714,718	934,309	219,591	....
Repayments of Advances....	1,114,548	1,338,601	224,053	....
Total Income.....	50,512,806	51,997,862	1,589,026	103,970
Deduct Decrease			103,970	
Increase on the Year			1,485,056	

Sources of Revenue.	Quarters ended 5th April.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs	4,432,832	4,325,941	....	106,891
Excise	2,098,581	1,943,350	....	155,231
Stamps	1,657,749	1,651,699	....	6,050
Taxes.....	111,476	199,309	87,833	....
Property Tax.....	2,152,233	2,567,714	415,481	....
Post Office.....	282,000	282,000	....	....
Crown Lands.....	72,000	65,000	....	7,000
Miscellaneous	19,518	10,687	....	8,831
Total Ordinary Revenue	10,826,389	11,045,700	503,314	284,003
Imprest and other Moneys.	221,096	276,316	55,220	....
Repayments of Advances....	171,859	111,972	....	60,787
Total Income.....	11,219,344	11,433,088	558,534	344,790
Deduct Decrease			344,790	
Increase on the Year			213,744	

Consolidated Fund Operations.—The total income brought to this account in the quarter ended 5th April, 1854, was 11,658,062*l.* The total charge upon it was 10,076,287*l.*, leaving a surplus of 1,581,775*l.*

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the First Quarter of 1854; together with the Monthly and Quarterly Average—(Continued from p. 89.)

[Supplied by the Controller of Corn Returns, H. F. JADIS, Esq.]

Weeks ended on a Saturday, 1854.	Weekly Average.					
	Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January 7	76 2	41 3	25 5	49 8	46 11	50 2
„ 14	78 10	42 0	26 4	47 7	48 9	51 7
„ 21	82 4	42 10	27 2	50 5	48 9	51 5
„ 28	83 3	43 0	27 1	51 4	43 0	52 5
Average for January	80 1 $\frac{3}{4}$	42 3	26 6	49 9	48 1	51 4 $\frac{3}{4}$
February 4	82 8	41 8	27 0	49 1	48 3	52 6
„ 11	82 4	41 3	27 4	48 2	47 10	50 3
„ 18	80 1	39 11	27 5	49 5	46 10	51 7
„ 25	78 5	38 4	27 1	49 10	45 11	48 7
Average for February	80 10	40 3	27 2	49 1	47 2	50 8 $\frac{3}{4}$
March 4	78 3	37 10	27 0	47 2	45 10	48 5
„ 11	79 6	38 7	27 2	49 5	45 2	48 2
„ 18	79 2	38 9	27 7	50 2	45 11	47 5
„ 25	78 4	38 6	27 5	53 2	45 0	47 7
Average for March	78 9 $\frac{3}{4}$	38 5	27 3	49 11 $\frac{3}{4}$	45 5 $\frac{3}{4}$	47 10 $\frac{3}{4}$
Average for the Quarter ..	79 6 $\frac{3}{4}$	40 1	26 11 $\frac{3}{4}$	49 10	46 8	49 8

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ended 5th January, 5th February, and 5th March, 1854; the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouses at the close thereof.—(Continued from p. 89.)

[Compiled from the "London Gazette."]

WHEAT.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1854.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th Jan.	333,141	8,257	341,398	333,141	8,257	341,398	141	..	141
5th Feb.	291,876	2,614	297,190	291,876	2,614	297,190	141	..	141
5th Mar.	283,222	140	283,362	283,222	140	283,362	..	..	..

WHEAT-FLOUR.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1854.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th Jan.	227,389	21,696	249,085	227,389	21,696	249,085	..	..	..
5th Feb.	815,345	21,099	836,444	815,345	21,099	836,444	..	..	..
5th Mar.	393,307	83	393,390	393,307	83	393,390	..	..	..

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week ended on a Saturday, for the First Quarter of 1854.

[Compiled from the "London Gazette."]

ISSUE DEPARTMENT.

Date.	Notes Issued.	Notes in hands of Public.	Government Debt.	Other Securities.	Gold Coin and Bullion.	Silver Bullion.
1853.	£	£	£	£	£	£
December 31 1854.	29,180,080	21,077,860	11,015,100	2,984,900	15,180,080	...
January 7	29,148,800	21,348,200	11,015,100	2,984,900	15,148,800	...
" 14	29,383,840	21,940,825	11,015,100	2,984,900	15,383,840	...
" 21	29,406,690	22,271,495	11,015,100	2,984,900	15,406,690	...
" 28	29,517,025	22,348,385	11,015,100	2,984,900	15,517,025	...
February 4	29,523,620	22,557,115	11,015,100	2,984,900	15,523,620	...
" 11	29,466,910	22,108,570	11,015,100	2,984,900	15,466,910	...
" 18	29,513,220	21,654,800	11,015,100	2,984,900	15,513,220	...
" 25	29,515,460	21,699,505	11,015,100	2,984,900	15,515,460	...
March 4	29,157,670	21,557,950	11,015,100	2,984,900	15,157,670	...
" 11	28,641,070	21,014,415	11,015,100	2,984,900	14,641,070	...
" 18	28,062,515	20,783,850	11,015,100	2,984,900	14,062,515	...
" 25	27,874,310	21,240,775	11,015,100	2,984,900	13,874,310	...

BANKING DEPARTMENT.

Date.	Proprietors' Capital.	Rest.	Public Deposits.	Other Deposits.	Seven Day and other Bills.	Total Dr.
1853.	£	£	£	£	£	£
December 21 1854.	14,553,000	3,218,826	11,409,933	11,041,049	1,172,684	41,395,492
January 7	14,553,000	3,247,594	8,291,993	12,741,634	1,215,059	40,052,580
" 14	14,553,000	3,293,813	3,213,993	14,140,492	1,232,329	36,435,627
" 21	14,553,000	3,333,780	2,646,783	13,894,599	1,232,096	35,660,258
" 28	14,553,000	3,339,394	2,515,384	13,486,234	1,202,155	35,096,167
February 4	14,553,000	3,349,523	2,121,718	12,608,926	1,144,582	33,777,749
" 11	14,553,000	3,440,601	1,981,907	12,357,045	1,119,351	33,451,904
" 18	14,553,000	3,445,498	2,440,107	12,177,209	1,086,779	33,702,593
" 25	14,553,000	3,383,249	2,722,347	11,830,574	1,102,638	33,591,806
March 4	14,553,000	3,713,915	2,741,851	11,244,639	1,090,924	33,344,329
" 11	14,553,000	3,718,228	2,899,597	10,887,596	1,126,432	33,184,653
" 18	14,553,000	3,730,877	3,678,817	11,805,383	1,128,507	34,396,584
" 25	14,553,000	3,744,205	4,423,827	11,092,226	1,124,969	34,938,227

Date.	Government Securities.	Other Securities.	Notes.	Gold and Silver Coin.	Total Cr.
1853.	£	£	£	£	£
December 31 1854.	15,044,330	17,576,123	8,102,220	672,519	41,395,492
January 7	14,833,299	16,736,409	7,800,600	682,272	40,052,580
" 14	13,614,025	14,663,295	7,443,015	655,292	36,435,627
" 21	13,537,638	14,297,849	7,135,195	689,576	35,660,258
" 28	13,232,716	13,988,622	7,168,640	706,189	35,096,167
February 4	12,537,716	13,870,465	6,966,505	703,063	33,777,749
" 11	11,911,666	13,415,280	7,358,840	736,618	33,451,904
" 18	11,757,704	13,346,376	7,858,420	740,093	33,702,593
" 25	11,757,704	13,247,442	7,815,955	770,705	33,591,806
March 4	11,751,555	13,241,821	7,599,720	751,233	33,344,329
" 11	11,747,728	13,054,655	7,626,655	755,615	33,184,653
" 18	11,814,700	14,512,895	7,278,665	760,324	34,396,584
" 25	11,792,116	15,757,604	6,633,535	754,972	34,938,227

CURRENCY.—Continued.

COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in England and Wales in each week, ended on a Saturday, for the First Quarter of 1854.—(Continued from page 96.)

[Compiled from the "London Gazette."]

ENGLAND AND WALES.			
Date.	Private Banks.	Joint Stock Banks.	Total.
1853.	£	£	£
Dec. 31.....	3,833,499	3,036,370	6,869,869
1854.			
Jan. 7.....	3,899,711	3,060,464	6,960,175
„ 14.....	3,967,297	3,132,693	7,099,990
„ 21.....	3,955,018	3,096,397	7,051,415
„ 28.....	3,942,131	3,077,395	7,019,526
Feb. 4.....	3,919,252	3,058,583	6,977,835
„ 11.....	3,880,147	3,053,431	6,933,578
„ 18.....	3,842,268	3,044,426	6,886,694
„ 25.....	3,817,815	3,055,082	6,872,897
March 4.....	3,817,451	3,068,703	6,886,154
„ 11.....	3,819,763	3,088,563	6,908,326
„ 18.....	3,791,697	3,093,191	6,884,888
„ 25.....	....	....	....

Fixed Issues—Private Banks, £4,616,609; Joint Stock Banks, £3,055,082.

Average amount of Promissory Notes in Circulation in Scotland and Ireland during the Months ended the 21st of January, the 18th of February, and the 18th of March, 1854.—(Continued from page 96.)

SCOTLAND.			
Date.	£5 and above.	Under £5.	Total.
1854.	£	£	£
Jan. 21.....	1,345,312	2,652,812	3,998,124
Feb. 18.....	1,405,994	2,568,114	3,974,108
Mar. 18.....	1,350,554	2,493,804	3,844,358

IRELAND.			
Date.	£5 and above.	Under £5.	Total.
1854.	£	£	£
Jan. 21.....	2,806,044	3,733,684	6,539,728
Feb. 18.....	2,831,496	3,963,207	6,794,703
Mar. 18.....	2,818,156	3,892,622	6,710,778

Fixed Issues—Scotland, £3,087,209; Ireland, £6,354,494.

QUARTERLY JOURNAL
OF THE
STATISTICAL SOCIETY.

SEPTEMBER, 1854.

Our Commerce with Russia, in Peace and War. By J. T. DANSON, Esq.,
Barrister-at-Law.

[Read before the Statistical Society, 19th June, 1854.]

PART I.—PRELIMINARY.

THE purpose of this paper is to afford materials for answering the question—

What is likely to be the effect of the war we are now engaged in upon our commerce with Russia?

It will be observed, in the first place, that we have taken the initiative in the war; and that its immediate operation, under the aspect suggested by this question, is unusually simple in form. It consists only in a blockade of the Russian ports, we having no access to her land frontiers. And these ports all open upon inland seas, egress from which must be extremely difficult in the face of a hostile fleet. In other words, we have little more to consider than the effect of our own acts upon our own share of the maritime commerce of Russia.

Obviously, then, the first thing wanted is a clear account of the commerce of Russia, in general; then a similar account of our share in it; and, finally, whatever authentic data may be available on which to estimate the probable influence of the steps we have taken to put a stop to commercial intercourse between the two countries.

At the very outset of the inquiry, however, it becomes apparent that the commerce of Russia, as well as the country itself, and the people, are marked by features broadly distinguishing each from any other we are acquainted with. And, if not at first sight equally apparent, it may be reasonably suspected that these peculiarities have an important bearing upon the present subject. Hence it is necessary to a right understanding of what we are about, that they should first receive some attention.

A great deal has been said of the enormous extent of Russia;

but the extent of what now concerns us is not greater than can easily be brought within manageable limits. The area of Russia in Europe, according to M. de Koeppen, may be taken, exclusive of Poland, to be about 2,000,000 of English square miles. A large space; but not without parallel. The United States of America, including their share of the Oregon territory, as settled by the treaty of 1846, is supposed, upon data at least equally sound, to contain 2,500,000 square miles. And British North America, extending as it does from the Atlantic to the Pacific, and from the northern frontier of the United States to the Arctic Sea, is about as large as the United States, or about one-fourth larger than Russia in Europe. Extent of territory is but one of the elements of national power; and, unless duly combined with the rest, is apt to prove a source of weakness rather than of strength.

The Russian census of 1838, increased in its results, according to the same authority, by about $1\frac{1}{3}$ per cent. per annum, gives us, for the population of this area, in 1854, about 62,000,000 souls.*

It is true that Russia in Europe includes less than one-third in extent of what is called the Russian Empire; but the remainder may, for our present purpose, be put aside, seeing, (1) that its population cannot be set down, upon data similar to those above-mentioned, at more than six or seven millions; (2) that over some three millions of this number, inhabiting the four provinces south of the Caucasus, the Russian government has never exercised an undisputed authority, and has now no effective control whatever; (3) that the three or four millions more, supposed to be scattered over the vast territory east of the Oural mountains, shut in as they are between lofty mountain-ranges and the Arctic Sea, are utterly without influence upon any European question; and (4) that the Russian colonies in America are, and, from their position are likely to remain, perfectly insignificant.

The quasi-kingdom of Poland might well be dealt with apart. Whether we consider the country or the people, we find ample reason for deeming it naturally no part of Russia, properly so called; and we know that the political tie is maintained only on the compulsion of an authority, the future maintenance of which is open to some doubt. In order, however, to shorten the work before us, we may include the kingdom of Poland, the area of which is estimated at rather more than 50,000 square miles, and the population now exceeds 5,200,000. This will make the total area, now to be considered, about 2,050,000 square miles (English), and the population, in the present year, about 67,000,000.

If we now turn to a map of Russia, we observe that, of the fifty-two governments or provinces within the space in view, nine may be said to border on the Baltic Sea, or to be very closely con-

* The population of the United Kingdom being about 29,000,000, and that of France 36,000,000, making together 65,000,000, Russia, if we add the 5,000,000 or 6,000,000 in Poland, may be said to have more than both its opponents. But, again, population is only one of the elements of national power. Wealth, civilization, national character, and the extent to which the natural resources of the country have been developed, are others: in all of which Russia is obviously and largely inferior to either of her opponents

nected with it by navigable rivers, and consequently open to the immediate influence of a hostile fleet in that sea. They are enumerated below, going from north to south; and may, for the sake of distinction, be termed

The Baltic Provinces.

- | | |
|-------------------------------|---------------------------|
| 1. The Grand Duchy of Finland | 6. Courland |
| 2. St. Petersburg | 7. Vilna |
| 3. Esthonia | 8. Grodno |
| 4. Livonia | and |
| 5. Vitebsk | 9. The Kingdom of Poland. |

It may be inferred, from the most authentic data yet available, that the total population of these nine provinces amounts to about 12,400,000.

Of this total, not more than 1,700,000 can be supposed to inhabit Finland, giving an average (if we deduct one-fourth of the area of the country, on account of the lakes there abounding) of about 17 to the English square mile.

In the seven provinces extending southwards, from St. Petersburg to Grodno inclusive, there are probably now, according to the method of computation adopted by M. de Koeppen, a population of about 5,500,000. The area of this group being about 106,000 square miles, the average density of its population would be about 52 per square mile. But here, it should be observed, that the density increases, with remarkable regularity, as we proceed from the northern to the southern end of the group—the proportion for the province of St. Petersburg (exclusive of the city) being about 42, and that for the province of Grodno about 68, per square mile.

The kingdom of Poland, with its population of about 5,200,000, upon an area of less than 51,000 square miles, has an average of about 103 per square mile.

If we now turn again to the map, it will be observed that, bordering upon the Black Sea, or immediately served by rivers more or less navigable, and debouching in that sea, are five other provinces, which we may call

The Black Sea Provinces.

- | | |
|---------------|---------------------------|
| 1. Bessarabia | 4. Ekaterinoslav, and |
| 2. Kherson | 5. The country of the Don |
| 3. Taurida | Cossacks. |

These may be taken together as covering an area of about 160,000 square miles (English). Their population, estimated upon the basis before referred to, may be supposed to be, in the present year, about 4,150,000, giving an average density of only 26 per square mile. But this density varies materially in the different provinces, and is probably in each somewhat as under:—

	Population per Sq. Mile.
Bessarabia	48
Kherson (including the city of Odessa)	29
Taurida	25
Ekaterinoslav.....	36
Country of the Don Cossacks	11

It will be remembered that no part of the territory comprised in the two districts, thus distinguished as "*the Baltic provinces*" and "*the Black Sea provinces*," formed part of the Russian Empire until about 150 years ago; and that the greater part of it, more particularly in the south, has been brought under the dominion of the czars within less than half that period.* And great as is the extent of these border provinces, and though without them Russia would have no communication by sea with the rest of the world, except through the Arctic Ocean, their condition, and the commerce carried on through them with other countries, affords good reason for regarding them as not yet permanently amalgamated with the central provinces.

Turn we now to these central provinces. Here we soon perceive that Moscow is still the true capital of Russia.† St. Petersburg, as a recent French writer has well observed, is rather "the bow-window at which the imperial court and government take the air of European civilization."‡ In the central provinces around Moscow, knit

* *The Crimea*.—Conquered by the Turks A.D. 1475; but left under the rule of native khans. In 1774, Catherine of Russia stipulated for the independence of the khans. In 1783, she took forcible possession of the country, and annexed it to the Russian Empire. In January, 1784, Turkey acquiesced by treaty. Then began the naval power of Russia in the Black Sea. The country is united to the mainland by an isthmus about five miles wide. Its estimated extent is about 15,000 square miles. Population unknown; but thinly scattered. Chiefly Tartars, with some Russians, Greeks, and Germans; but living much apart from each other. Their occupations chiefly pastoral. The land fertile; but the climate said to be unhealthy: probably from want of drainage and cultivation. The prevalent faith is Mohammedan.

Bessarabia.—Formed part of Turkey till 1809. In April of that year, Russia declared war against Turkey; it is supposed in pursuance of an agreement with Napoleon, at Erfurt, in October, 1808. The Turks, though unaided, resisted gallantly till the spring of 1812, when Russia, then on the eve of a war with France, made peace (28th May, 1812), adding Bessarabia to the empire, and thus advancing her frontier to the Pruth, and, from the mouth of that river, down the Danube to the Kilia, its most northern *embouchure* in the Black Sea.

The Delta of the Danube.—Taken by Russia under the peace of Adrianople (14th September, 1829), which ended the war against Turkey begun by Russia 26th April, 1828. Russia thus acquired all the three mouths of the Danube. At the same time, Russia took power from Turkey to establish *quarantine*, not only at the river's mouth, but between the southern and northern portions of the Turkish part of the river, or between Bulgaria and Moldo-Wallachia. This power, being exercised at the discretion of Russia, has been used to obstruct the commerce of the river, by delays, fees to officials, &c. It should be observed, however, that the treaty of Vienna (1815) had made the Danube a free way for all nations, and had prohibited any increase of tolls without the consent of all the states bordering on the river; at the same time burdening these states with the maintenance of the towing-paths, and the removal of all obstructions to the navigation. In 1840, Russia and Austria agreed that the former should levy a toll on vessels entering the middle (or Sulina) mouth, and should keep it free from obstructions. The toll has been taken; but the work has been neglected.

† Moscow is not only the true capital of Russia, but is also the chief seat of Russian manufactures. According to Haxthausen, from 80,000 to 90,000 of the population leave the city every summer to work in the country; and return, after harvest, to their work in the factories.

‡ "Cette capitale est la ville d'apparat de l'autocratie Russe, la fenêtre de balcon à laquelle le gouvernement impérial, la cour, et les hauts fonctionnaires de l'état hument le grand air de la civilisation Européenne."—M. Ch. Vogel, *Journal des Economistes*, No. 142.

together by a language, customs, and feelings of its own, and forming the Russia of Cromwell's time, we still find the real empire of the czars. St. Petersburg, a century and a half after its foundation, still broadly exhibits its artificial character in its very census. Take that of September, 1832, the last of which we have the details, and mark the very large excess of males in its population of every class. We are told that in that year there were of

	Males.	Females.
Clergy	1,034	740
Nobles	24,342	18,426
Merchants	7,121	4,319
Burghers	25,914	14,789
Foreigners	9,160	5,502
Military	45,324	9,883
Artizans	7,020	4,065
Servants	68,480	34,457
Peasants	116,974	24,752
Various	33,877	23,814
Total	339,246	140,477*

* Board of Trade Tables, 1820-33.—Consuls' Returns, p. 540.

No explanation of this extraordinary disproportion has yet been offered, which does not either assume or indirectly admit the existence of a state of society in some degree compulsory.*

* The state of the population of St. Petersburg, as exhibited in the census of 1832, may be more justly appreciated if we consider that, under normal conditions, a large proportion of the fixed population of any given locality must be under fifteen years of age; and that among these the numbers of each sex may be safely assumed to be nearly equal: seeing that they are everywhere born in nearly equal numbers, and that the causes which operate upon the local distribution of the sexes can scarcely have much influence before that age. According to M. Quetelet (*Sur l'Homme*, &c., b. i. cap. 7), the proportion of the population under 15 in Belgium, in 1829, was 33 per cent., and in Sweden, in 1820, it was 32 per cent. Taking only 20 per cent. as the proportion for St. Petersburg, we have (in 1832) an adult population of 383,000, composed of 291,000 males and 92,000 females, or more than 3 men to 1 woman.

Again, if, without reference to the probable existence of children in such a city, we deduct only the military (45,324 men and 9,883 women) and the foreigners (9,160 men and 5,502 women), we find that the remainder of the population of St. Petersburg, of all ages, bears the proportion of about 16 females to 35 males. But the foreigners, taken alone, have a proportion more natural than this, or about 21 females to 35 males. Whence it may be truly said that, in this important particular, the Russian population of St. Petersburg, apart from the military, seem still to reside there rather as foreigners than as natives. Mr. McCulloch (*Geographical Dictionary*, Art. *Petersburg*) states the population of 1836 at 451,974, composed of 330,064 males and 121,410 females, a proportion even less natural than that shown by the census of 1832. This writer attempts to account for the disproportion by referring it to the three classes of *military*, of *servants*, and of *peasantry*. But the details of 1832 forbid the acceptance of any such explanation, as they show that the disproportion is unusually large in every class of natives, from the highest to the lowest.

Around Moscow we find the ten most densely peopled provinces of the empire. These we may call—

The Central Provinces.

1. Moscow	6. Tambov
2. Tver	7. Riazan
3. Jaroslavl	8. Toula
4. Vladimir	9. Kalouga, and
5. Nijni Novgorod	10. Smolensk.

Relying upon the data of, and following the method used by, M. de Koeppen, for ascertaining the population of the empire in 1846, we may estimate the total population of these provinces at about 14,000,000, and their united area at about 175,000 square miles (English), or about twice the size of Great Britain. The density of the population, however, appears to vary, from 121 in the province of Moscow, and 115 in that of Toula (adjoining Moscow on the south), to 59 only in Smolensk, and 56 in Tver, the central provinces *nearest to St. Petersburg* being also those which are *most thinly peopled*.*

The comparative density of the population in the three groups of provinces thus selected—showing us how the people with whom we trade are located—may therefore be shortly stated thus:—

	Population per Sq. Mile. (English).
In Finland	17
In the Baltic Provinces, exclusive of Finland and Poland	52
In Poland	103
In the Black Sea provinces	26
In the central provinces	80
Throughout Russia in Europe	31

These details, then, conduct us to the important conclusion, that the people of Russia, as we have now to deal with them, are grouped round two main centres, one of which is Moscow, and the other Warsaw. Putting aside all reference to despotic political arrangements, we thus discover the natural centres of production and consumption; and in the connection existing between the productive powers and the external wants of these localities, on the one hand, and the nature of the commerce carried on by sea between Russia and the rest of the world, on the other, we may hope to find sure indications of the probable operation of a maritime war upon the Russian people in a mercantile point of view.

PART II.—THE COMMERCE OF RUSSIA.

The productive powers of the Russian people are yet small: hence they have not much to exchange with foreigners. The population of the United Kingdom numbers about 29,000,000, and sends abroad, in exchange for foreign commodities, British produce to an

* The significance of these figures will be more readily apprehended if it be remembered that the average for England and Wales, in 1841, was 275 per square mile; and that, at that date, Westmoreland, the least populous county in England, had 74, and Radnor, the least populous in Wales, had 59 to the square mile; while Lancashire had 944, and Middlesex 5,590, per square mile.

amount which cannot now be stated at a value less than 90,000,000*l.* sterling, or more than 60*s.* per head per annum. The French people, numbering some 36 millions, annually exchange a similar value of nearly 60,000,000*l.*, or about 33*s.* per head. The 67,000,000 of the Russian people export produce to the amount, at most, of 14,000,000*l.* a-year; say 4*s.* 2*d.* per head. In other words, their foreign commerce, in relation to their numbers, is about one-eighth of that of France, and about one-fifteenth of that of the United Kingdom.

Its nature is exactly such as its amount would indicate. While we export *manufactured* produce almost entirely, and the exports of our French neighbours are also largely of the same nature, the exports of Russia are, with scarcely an exception, of raw produce.*

The total value of the exports and imports may be gathered from the following figures, which relate to the commerce of the two years 1847 and 1848:—

Value of Exports from European Russia.

	Total.	To Great Britain.
	£	£
In 1847	21,234,462	7,363,681
„ 1848	12,023,469	6,324,343

Value of Imports into European Russia.

	Total.	From Great Britain.
	£	£
In 1847	11,464,616	3,513,650
„ 1848	11,945,456	4,178,542

The excess of the exports to Great Britain, as compared with the imports from the same country, is partly accounted for by the transmission of tropical produce direct from British colonies to Russia.

The high value of the Russian exports in 1847 was unusual, and

* The great natural source of Russian wealth is agriculture. But to this source little or no attention has yet been given by the government—in other respects so active in promoting the aggrandizement of the empire. Here, again, we may refer to the United States of America as affording an example of a similar area, inhabited by a different people. The first English settlement on the American continent was made, by a private company, in Virginia, A.D. 1607 (Michael Fedorowitz, the founder of the reigning dynasty of Russia, and grandfather of Peter the Great, ascended the throne A.D. 1613). The population of the United States of America, in 1850, was 23,263,000. The value of their exports of home produce, in the year ending 30th June, 1850, was 136,946,000 dollars (about twice the value of the average annual exports of Russia), equivalent to about 23*s.* 6*d.* per head. The exports of the United States are almost entirely agricultural, the manufactured produce not amounting to so much as one-twelfth in value of the whole. Those of Russia may be said to be also entirely agricultural; and were the industry of both countries freed from artificial restriction, it cannot be doubted that in both it would be turned almost exclusively into this channel for a very long period to come, and that to the great benefit of all concerned.—See “*Les Etats Unis d’Amérique*, par S. G. Goodrich, Consul des Etats Unis d’Amérique à Paris. 1852.”

arose almost entirely from the great demand for, and high price of, corn in that year. This is apparent in the following table, showing the principal items of the exports of the same two years, these being the two latest years for which the Russian accounts have yet been published in a complete form:—

Value of Principal Exports from European Russia.

	1847.	1848.
	£	£
Grain and flour	11,205,625	3,418,691
Tallow	2,322,771	2,352,726
Flax	1,439,159	1,445,567
Linseed	1,398,966	1,186,116
Hemp	1,199,400	1,013,039
Wool	667,991	343,517
Timber	593,209	389,168
Bristles	281,845	341,296

Here the accounts for 1848 may be taken to represent nearly the ordinary state of trade; and that of 1847 to show how it is liable to be altered by a large and sudden demand for corn.

The imports into Russia consist, with few and small exceptions, of (1) the produce of more southern, and of tropical countries, required by the civilized habits of the nobles, and the higher classes of the town population; of (2) manufactured articles, having almost exclusively the same destination; and (3) of raw materials and machinery for the nursing of some native manufactures, under a system of "protection to native industry," very costly to the country, but too recently in our own use to be fairly open to severe condemnation in England.

The table on the next page, compiled from Russian accounts, shows the main features of the import trade in the two years 1847 and 1848.

In the first five items of this account, the bulk of the population of Russia cannot be supposed to have much personal interest. The same may be said of No. 7. In No. 6, the population is generally interested, as in a necessary article of food.* Nos. 8 and 9 afford materials to factories, chiefly in the central provinces, which, under high protective duties, and consequently at high prices, supply cotton, silken, and woollen fabrics to such part of the ignoble population as can afford such luxuries—the nobles very generally disdaining the use of what comes from the native looms.

* The salt exported from the United Kingdom in 1851 amounted to 18,233,405 bushels, and went chiefly to the following customers:—

	Bushels.
The United States	6,747,218
British North America	2,086,110
British East Indies	2,534,616
Russia	2,010,585
Prussia	1,229,715

The specific gravity of salt being about 2·126, and the imperial bushel containing 80 lbs. of water, the bushel may be taken to be equal to 40 lbs. of salt. The Russian military allowance of salt is said to be about 24 lbs. per man per annum. Assuming that the Russian population, supplied with British salt, consumed on an

Value of Principal Imports into European Russia.

	1847.	1848.
	£	£
1. Sugar	1,359,634	1,374,947
2. Coffee	204,744	256,386
3. Tobacco	400,803	353,840
4. Wine	925,477	1,024,681
5. Fruit	367,218	378,835
	3,257,876	3,388,689
6. Salt	340,516	361,913
7. Textile manufactures—		
Silks	523,254	464,670
Woollens	332,181	260,985
Cottons	187,211	161,381
Linens	79,039	69,111
	1,121,685	956,147
8. Textile materials—		
Cotton, raw	884,718	1,301,612
„ yarn	831,246	764,891
Silk	622,911	624,739
Wool	280,031	274,345
9. Dye stuffs	883,994	854,568
	3,502,900	3,820,155

average 20 lbs. per head per annum, the 2,010,585 bushels sent thither in 1851 may have provided for a population of about 4,000,000. The greater part, however, of the salt we send to Prussia enters at the port of Dantzic; and its increase, even by the entire Russian supply, and its transmission thence to the Russian consumers, presents, while Prussia remains neutral, no difficulties likely to produce dangerous discontent in the latter country.

Further, it may be observed, that Russia in Europe, taken altogether, is not ill supplied with salt. It would appear, from a statistical work recently published (Paris, Renouard) by M. de Tegoborski, entitled “*Etudes sur les Forces Productives de la Russie*,” that the native mines are sufficient for the food of double the present population. But the places of production are so distant from Poland and the Baltic provinces as to make it cheaper to import salt for those districts. The richest of the native mines are in the governments of Orenbourg and Astrachan, Irkoutsk (in Siberia), and in Russian Armenia. The chief sources of foreign supply are the mines of Bochnia and Wieliezka, in Galicia, which are said to furnish nearly one-fifth of the whole quantity annually consumed in the empire, this quantity being, by Russian estimate, about 36,000,000 *poods*. It is said that 500,000 *poods* of salt are annually obtained from the salt-lakes of Russia alone.

The mines and lakes are monopolised by the government; and the sale of their produce, at a rouble per *pood*, brings to the revenue about 10,000,000 roubles per annum.

There is, therefore, but little probability, looking at the facilities of internal transport possessed by the Russians, that (even if the German supply as well as our own were withdrawn) the want of salt would lead (as some recent writers have suggested) to any rebellious movement among the scattered and ill-informed population of Western Russia. Yet it may be useful to observe that the natural salt supply affords a popular reason for adding Galicia to Poland, and these, as one state, to the western provinces of Russia—and that, too, a reason which must always be made more palpable by hostilities between Russia and her neighbours.

Speaking in general terms, it may be said that the peasantry produce the exports, and the nobles and the higher class of burghers consume the imports.

The next table exhibits the distribution of the trade upon the northern and southern coasts of the empire, so far as this may be inferred from the relative quantity of shipping employed in carrying it on.

Tonnage of Vessels of all Nations, Entered Inwards and Cleared Outwards, in Russian Ports.

ENTERED.					
Ports.	1844.	1845.	1846.	1847.	1848.
	Tons.	Tons.	Tons.	Tons.	Tons.
On the Baltic.....	515,104	498,910	598,716	838,046	645,836
White Sea	72,614	94,678	129,292	118,588	51,196
Black Sea and Sea } of Azof.....}	511,944	533,470	570,714	969,554	615,076
Caspian	8,122	8,346	9,756	9,880	10,972
Total	1,107,784	1,135,404	1,308,472	1,936,068	1,323,080
Entered with cargoes	455,242	537,604	487,880	454,908	533,330

CLEARED.					
Total	1,090,004	1,145,822	1,345,728	1,998,568	1,177,994
Cleared with cargoes	1,064,238	1,121,092	1,308,968	1,915,876	1,065,758

The business of exchanging the exports for the imports may be said to be almost exclusively in the hands of foreigners, and is carried on almost entirely with foreign capital.* This is, in some degree, apparent in the shipping returns, where we find that, notwithstanding the most strenuous efforts of the government, continued during several generations, to make Russia a maritime power, not more than one-sixth of the shipping entering at and leaving Russian ports is registered as belonging to Russian subjects.

* The nobles, as a class, are too dignified, and the rest of the population at present too ignorant, to undertake with advantage the conduct of the foreign exchange. But for this ignorance, as well as for the corresponding lack of capital in Russian hands, the government is in part to blame, through its restrictions upon Russian industry and enterprise, and the consequent narrowing of the intercourse of its subjects with their more enlightened neighbours.

Tonnage of Vessels (in Lasts) in Russian Ports (including those in Ballast.)

ENTERED.			
		1847.	1848.
		Lasts.	Lasts.
Russian		119,542	94,849
British		285,890	312,668
Total		968,034	661,540

CLEARED.			
Russian		124,781	100,222
British		293,063	245,874
Total		999,274	588,997

With this account may be contrasted one showing the proportion of Russian shipping appearing among the vessels entering at, and clearing from, our own ports:—

Tonnage of Shipping, Entered Inwards and Cleared Outwards, in the Foreign Trade, at Ports of the United Kingdom, (excluding those in Ballast,) and distinguishing those belonging to British and to Russian Subjects.

ENTERED.				
	1847.	1848.	1849.	1850.
	Tons.	Tons.	Tons.	Tons.
British	4,238,956	4,020,415	4,390,375	4,070,544
Russian	80,420	76,108	80,219	88,289
Other countries.....	1,771,676	1,482,938	1,600,675	1,954,864
Total	6,091,052	5,579,461	6,071,269	6,113,696

CLEARED.				
British	3,205,794	3,553,777	3,762,182	3,960,764
Russian	42,600	52,777	57,422	74,965
Other countries.....	1,470,847	1,444,683	1,610,304	1,871,249
Total	4,719,241	5,051,237	5,429,908	5,906,978

Whence it appears that the Russian ships seen in our ports form scarcely 2 *per cent.* of the whole; or, in other words, taking all vessels at an average size, about 1 in 50 only are Russian.

The capital embarked in the conduct of the trade between the United Kingdom and Russia is well known to belong almost wholly to British subjects. England, however, in this instance, only acts upon a rule sufficiently common to be applicable, more or less, to

every nation with which she has dealings. It is with nations as with individuals, when two or more are concerned in the same transaction, the capital required is sure, in the long run, to be supplied in proportions varying with the disposable wealth of the parties. Having, as a people, a greater command of capital than any other, we find it advantageous to supply what is required in our trade with foreigners to an extent which is practically limited only by the demand for it, on the one side, and the prospect of security, and an adequate rate of interest, on the other. Of this fact, however, it would obviously be difficult to afford any satisfactory statistical proof apart from certain assumptions touching the action of the foreign exchanges which might reasonably be deemed foreign to the present purpose. Nor does this purpose seem to involve a necessity for formal proof of the fact, though its statement is of some interest with regard to the general question.

It remains to be observed, that though there is said to be only one good paved road in the empire—that from St. Petersburg to Moscow—the means of transport for goods between the interior and the coast are naturally good. The country forming, with hardly an exception, one vast plain, which is covered with snow for some months every year, sledge travelling is easy, and almost equally easy in any direction.* And further, the country is intersected with numerous rivers, which have already, and at no great expense, been so connected by canals as to form a network of waterways along which goods may be conveyed, at small cost, and with little or no interruption, from any of the provinces of the empire to the White Sea, the Baltic, the Black Sea, or the Caspian.†

Of the Russian tariff, I need scarcely say more than that it is so framed as to keep out almost all our manufactures, except at such prices, duty paid, as prevents their use by any class below that of the nobles, who, as they travel much, and are accustomed to all the arts and conveniences of civilized life in use among the corresponding classes in England and France, habitually draw from these countries the means of supplying them. To the Russian people, as a body, the manufactures of other countries are yet almost unknown.‡

* L'hiver, long et rigoureux, qui pèse sur la plus grande partie de la Russie, quoique défavorable à l'industrie sous d'autres rapports, lui procure cependant l'avantage d'avoir pendant quatre ou cinq mois de l'année d'excellentes routes, préférables aux meilleures chaussées que l'art pourroit construire. Les commodités que le transport des marchandises retire du *trainage*, passent de beaucoup l'idée qu'on s'en fait en d'autres pays."—Storch, "Cours d'Economie Politique," liv. i. chap. 9. (St. Petersburg, 1815).

† The Volga, debouching in the Caspian, draws its waters from an area, the north-western confines of which come within 100 miles of St. Petersburg; and, with its tributaries, forms a system of water-carriage which serves nearly the whole of Central Russia, and finds its natural centre at Nijni-Novgorod, the locality of the great fair. The Dnieper, the Vistula, and the Niemen are also connected, so that the mouth of each may be reached through either of the others.

‡ The protective tariff of Russia seems to have been adopted under the influence of common European example, and to have grown more protective as the country multiplied its ties to the states-system of Europe. The tariff of 1767 was not so unfavourable to our commerce with Russia as to prevent its steady growth, at a rate quite in accordance with the increasing wealth and civilization of the two countries. But that substituted for it on 1st January, 1783, raised the duties on

In short, the direct influence of the government upon the foreign trade of Russia has been used chiefly to keep down the consumption of foreign articles, the greater part of which cannot be produced at all in Russia; and the remainder are such as can only be there produced by diverting Russian capital and labour into channels it would never flow into under free trade; and the indirect influence implied in the example of the court has done little to counteract this. Rude domestic manufactures, for the supply of the bulk of the population, and their sale at periodical fairs, under a method of commerce which has now fallen into disuse throughout the greater part of the rest of Europe—in other words, a cumbrous and costly mode of supplying the inevitable wants of the people—is thus defended against the innovations and improvements which modern civilization is elsewhere gradually, and in most places rapidly, introducing. And as fairs supply the place of fixed entrepôts, with frequent and rapid transit between them, so travelling journeymen supply through the greater part of the country the want of local mechanical skill.

PART III.—COMMERCE BETWEEN RUSSIA AND THE UNITED KINGDOM.

What sort of customers for our produce we have hitherto had in the Russian people may be gathered from the following account of their purchases during the last seven years:—

Declared Value of British and Irish Produce Exported from the United Kingdom to Russia, distinguishing the northern ports from those on the Black Sea, and to all the World, as compared with the total to Russia, in the seven years 1846-52.

Years.	To Northern Ports of Russia.	To Russian Ports in the Black Sea.	Total to Russia.	Total to all the World.
	£	£	£	£
1846	1,586,235	138,913	1,725,148	57,786,876
1847	1,700,733	143,810	1,844,543	58,842,377
1848	1,692,006	233,220	1,925,226	52,849,445
1849	1,379,179	186,996	1,566,175	63,596,025
1850	1,297,660	157,111	1,454,771	71,367,885
1851	1,157,543	132,161	1,289,704	74,448,722
1852	994,330	105,587	1,099,917	78,076,854*
Averages for the seven years	1,401,098	156,828	1,557,926	65,281,169

* The British exports for 1853 exceeded 95,000,000*l*.

most articles of British manufacture in proportions varying from 50 to 300 per cent. The new duties were also so levied as to bear, with especial force, upon the carrying trade previously carried on by British subjects between southern Europe and the Baltic ports of Russia—doubtless partly to promote Russian trade through the newly acquired territories on the Black Sea. The tariff of January, 1851, replacing that of 1841, removes a prohibition on the import of cotton-cloths, and imposes duties varying from 48 copecks to 2 silver roubles 50 copecks *per pound weight*; but increases considerably the duties on woollen cloths, previously admitted. The measure looks much more like an attempt to strengthen the barrier against our produce, by reducing the premium on smuggling, than an advance towards sounder principles.

It will be observed that, while the declared value of our exports of British produce to all the world has increased from 57,000,000*l.* sterling at the beginning of this period to 78,000,000*l.* at the end of it, the value of what has been sent to Russia has fallen off with similar regularity and in a much larger proportion. But assuming that this diminution may possibly have arisen from causes of a temporary character, and taking, as a broader and safer ground of comparison, the average of each column for the whole seven years, we find that the Russian demand for British produce is only about $2\frac{1}{3}$ per cent. of the whole; or, in other words, that, of every 100*l.* worth of goods we turned out for exportation during the seven years in view, Russia bought only to the value of about 2*l.* 6*s.*

This account, however, concerns only the produce of the United Kingdom. We have also exported to Russia large quantities of foreign and colonial produce.

In the Russian account of imports for 1848, we find Great Britain set down for a total value of 26,390,795 *silver roubles*, which, (according to the official accounts) is equal to about 4,178,542*l.* The following chief items will afford some idea of how this total was composed.

Value of the principal Imports into European Russia from Great Britain in 1848.

	Silver Roubles.
Cotton, raw	6,498,472
" yarn	4,662,862
Wool	1,393,939
Dye stuffs	2,253,676
Machinery	1,343,619
Coal	1,067,823
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	17,220,391
Raw sugar	509,794
Salt	1,342,324
Drugs	730,817
Woven fabrics	1,477,823
Furs	419,025
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	21,699,174
	<hr/>
Total	26,390,795*

Thus, about two-thirds (in value) of what has been taken into Russian ports from this country has, according to Russian accounts, consisted of the materials for making at home what we could undoubtedly have made for her, better and more cheaply, in this country: a result of high duties on our manufactures which may be perfectly agreeable to the tendencies of the Russian government, but which cannot conduce to the welfare or to the real power of the Russian people, and as certainly tends to restrict their intercourse with the rest of the world, and thus to retard their advancement in civilization.

The real extent of the trade between this country and Russia, however, is greater than can be exhibited in any accounts yet extant in either country. On the one hand, much of what Russia obtains

* The average rate of exchange being about 3*s.* 2*d.* per silver rouble.

from other countries is paid for in Russian produce sent to this country, and balanced by British produce sent either directly to the country which thus becomes our creditor, or elsewhere to meet bills drawn by us in favour of the creditor country. On the other hand, much of the tropical and other produce imported from other countries into Russia is so imported under British orders and in British vessels. It has been seen (*ante* p. 203) that, from two-fifths to one-half of the vessels entering Russian ports before the war broke out were British—and, notwithstanding the restrictions placed by the government of St. Petersburg upon the action of foreigners as merchants in Russian ports, it is well known that the foreign trade of the country is almost entirely in the hands of foreigners, among whom our fellow subjects are, and have long been, by much the most numerous.

The two following tables exhibit a tolerably complete view of the direct trade between Great Britain and Russia: the first showing, from our trade accounts, the share taken by Russia of each of the principal items of our *export* trade, alike of home and of foreign and colonial produce; and the next the amount contributed by Russia to each of the items of our *import* trade in which that country has any considerable share.

The principal Articles of British Produce exported in 1850, with the share of each taken by Russia.

	Exported to Russia.		Total Declared Value exported from Great Britain.
	Northern Ports.	Southern Ports.	
	£	£	£
Cotton twist and yarn.....	244,755	870	6,383,704
Coals, cinders, and culm.....	73,670	8,196	1,284,224
Lead and shot	63,826	1,926	387,394
Woollen manufactures	61,838	4,418	13,047,419
Cotton	59,183	2,013	21,873,697
Hardwares and cutlery	58,748	2,024	2,641,432
Tin, unwrought	35,957	1,790	124,798
Iron and steel, wrought and un- wrought.....	36,052	4,009	5,350,056
Salt	27,001	1,408	224,501
Beer.....	12,763	3,790	558,794
Silk manufactures	8,457	122	1,255,641
Linen yarn	7,279	....	881,312
Earthenware	4,716	1,969	999,448
Linen manufactures	4,399	1,015	3,947,682
Apparel, slops, &c.....	4,234	600	2,379,800
Brass and copper manufactures	1,392	1,340	1,978,196
Glass	1,589	2,064	289,420
Plate, jewellery, &c.	5,348	566	296,078
Stationery	3,654	156	408,380

We may infer, from this account, that the principal consumers of British produce are found in the barracks, bureaux, and palaces of St. Petersburg—with two notable exceptions: one being the salt, a condiment necessary to all classes, and scarce in western Russia; and the other, some materials for the protected manufactures carried on in the central districts.

The following table shows the comparative importance of the principal articles of Russian produce in the English market:—

*Articles Imported from Russia into the United Kingdom, in 1850, in quantities so large as to constitute one-tenth of the total importation of each.**

	From Russia.		Total Quantity imported into the United Kingdom.
	From Northern Ports.	From Ports within the Black Sea.	
Bristles..... lbs.	1,954,590	2,132	2,305,685
Wheat..... qrs.	68,809	569,479	3,738,995
Oats..... „	277,601	....	1,154,473
Flax..... cwt.s.	1,240,766	....	1,822,918
Hemp..... „	600,519	473	1,048,635
Iron..... tons	4,645	15	34,066
Linen goods..... £	6,281	....	6,750
Linseed and flax seed qrs.	320,796	133,447	608,984
Tallow..... cwt.s.	841,673	12,471	1,240,645
Tar..... lasts	9,082	....	12,097

In this table is very distinctly marked the difference between the exports of the Baltic and those of the Black Sea. From the southern ports we receive little besides wheat, and some linseed, with small quantities of tallow and wool. From the northern ports we receive the larger quantity of linseed, some wheat, and a supply of oats nearly equal to one-third of our average annual importations—and flax, hemp, tallow, tar, and bristles in quantities so large as to form the chief part of our foreign supply of each.

To the six important articles, *grain, hemp, flax, tallow, bristles, and linseed*, of which the Russian supply has hitherto formed more than half of all we have usually imported, it is necessary to give more particular attention. I have, therefore, as to each of these articles, compiled a table extending the information given above, as to the year 1850 only, over the fourteen years 1840 to 1853 inclusive.

* Another article of some importance—though rather for its quality than its quantity—is *timber*. As imported from Russia it is classed in the official accounts as in the following table. The supplies from four other quarters, and the total quantity of each imported in 1850, is added, by way of showing the relative importance, in point of quantity, of what we have hitherto received from Russia. But as the timber of Russia has some peculiar merits of quality, this test of its importance in the British market is not perfect.

Timber imported in 1850.	From Russia.	From Sweden.	From Norway.	From Prussia.	From British North America.	Total imported.
Timber sawn or split..... } loads	177,196	84,745	56,457	39,757	434,818	794,178
Timber not sawn or split..... } loads	27,183	29,908	34,197	136,230	618,039	868,179
Lath-wood.... fathoms	5,046	404	7	2,276	4,447	12,195
Staves..... loads	280	45	126	23,892	....	82,587

All the Russian timber may be said to come from the northern ports.

Were the Russian fleet in command of the Baltic, of course our entire supply of timber from the north of Europe would be stopped.

TABLE I.

Grain, Meal, and Flour, Imported into the United Kingdom, from Russia and from all Countries, in the Fourteen Years from 1840 to 1853, inclusive.

Years.	From Russia.			Total from all Countries.
	Northern Ports.	Ports on the Black Sea.	Total from Russia.	
	Qrs.	Qrs.	Qrs.	Qrs.
1840	193,869	250,095	443,964	3,920,014
1841	48,129	82,145	130,274	3,627,562
1842	98,216	260,480	358,696	3,697,279
1843	51,801	30,377	82,178	1,433,891
1844	97,143	104,292	201,435	3,030,681
1845	159,592	30,670	190,262	2,429,916
1846	301,624	172,186	473,810	4,752,174
1847	1,620,026	531,742	2,151,768	11,912,864
1848	371,829	342,823	714,652	7,528,472
1849	340,633	572,735	913,368	10,669,661
1850	363,779	589,250	953,029	9,019,590
1851	572,257	762,160	1,334,417	9,618,026
1852	343,949	957,877	1,301,826	7,746,669
1853	634,404	1,070,483	1,704,887	10,173,135
	4,246,877	4,827,070	9,073,947	66,668,417

Whence it appears that, upon an average of the last seven years, about 14 *per cent.* of our total imports of grain, meal, and flour has come from Russia, of which about 8 *per cent.* came from the ports in the Black Sea, and the remaining 6 *per cent.* from the northern ports.

TABLE II.

*Hemp (undressed) Imported into the United Kingdom, from Russia and from all Countries, in the Fourteen Years from 1840 to 1853, inclusive.**

Years.	From Russia.	From all Countries.
	Cwts.	Cwts.
1840	598,840	684,068
1841	542,764	652,165
1842	415,565	585,905
1843	463,061	735,743
1844	656,015	913,233
1845	603,286	931,850
1846	620,656	882,894
1847	542,857	811,565
1848	536,400	845,771
1849	636,938	1,061,893
1850	600,519	1,048,635
1851	664,580	1,293,412
1852	543,960	1,068,155
1853	846,370	1,237,872

* Hemp comes to us almost exclusively from the northern ports.

So that, in the first seven years, we obtained from Russia about 72 *per cent.* of our whole supply, and, in the last seven years, only about 62 *per cent.*—showing that, while we have increased our imports in the proportion of 11 to 6, we have reduced the propor-

tions of the total supply for which we are dependent on Russia in the proportion of 7 to 6.

TABLE III.

*Flax (dressed and undressed) Imported into the United Kingdom, from Russia and from all Countries, in the Fourteen Years from 1840 to 1853, inclusive.**

Years.	From Russia.	From all Countries.
	Cwts.	Cwts.
1840	870,401	1,253,240
1841	969,457	1,346,843
1842	844,725	1,145,759
1843	1,089,386	1,437,150
1844	1,112,023	1,583,494
1845	859,627	1,418,323
1846	740,396	1,147,092
1847	681,167	1,052,089
1848	1,085,732	1,463,661
1849	1,352,275	1,806,673
1850	1,240,766	1,822,918
1851	818,676	1,194,184
1852	949,907	1,408,714
1853	1,287,988	1,883,374

* So little flax is received from the ports in the Black Sea, that the entire Russian supply may be treated as coming from the northern ports.

Thus, the average annual importation of flax from Russia, which, in the three years 1841-2-3, was 967,000 cwts., had increased, in 1851-2-3, to an average of 1,018,000 cwts., or by less than 5 per cent. And the quantity imported from other countries increased, in the same period, from an average of 342,000 to one of 477,000 cwts., or by nearly 40 per cent. An indication of the fertility of other sources of foreign flax, which the present high prices cannot but tend further to develop.

TABLE IV.

Tallow Imported into the United Kingdom, from Russia and from all Countries, in the Fourteen Years from 1840 to 1853, inclusive.†

Years.	From Russia.	From all Countries.
	Cwts.	Cwts.
1840	1,115,041	1,200,489
1841	1,018,446	1,242,553
1842	842,137	1,011,370
1843	979,728	1,171,618
1844	865,381	1,079,486
1845	925,527	1,194,284
1846	840,181	1,111,818
1847	744,069	1,099,275
1848	988,503	1,498,359
1849	866,327	1,465,629
1850	841,673	1,240,645
1851	810,449	1,221,066
1852	609,233	1,049,703
1853	847,267	1,178,370

† A very small proportion—not more than from 1,000 to 2,000 tons—of the tallow from Russia comes from the southern ports.

The whole quantity of tallow imported from Russia, in the three

years 1841-2-3, was 2,840,000 cwts.; and from other countries, in same three years, 585,000 cwts. In 1851-2-3, from Russia, 2,266,000 cwts.; and from other countries, 1,182,000 cwts. So that, while the Russian supply, in the ten years, fell off by nearly 20 per cent., the supply from other sources increased by more than 100 per cent.

TABLE V.

Bristles Imported into the United Kingdom, from Russia and from all Countries, in the Fourteen Years from 1840 to 1853, inclusive.

Years.	From Russia.	From all Countries.
	Lbs.	Lbs.
1840	1,476,761	1,889,504
1841	1,419,514	1,735,502
1842	1,385,579	1,532,739
1843	1,724,370	2,020,435
1844	1,777,916	2,132,300
1845	1,908,456	2,412,267
1846	1,904,711	2,342,782
1847	1,278,570	1,547,981
1848	1,804,924	2,064,739
1849	2,141,505	2,504,676
1850	1,956,722	2,305,685
1851	1,684,773	2,238,710
1852	1,459,303	2,004,676
1853	2,477,789	

Here, too, the supply from other sources has doubled, while that from Russia has scarcely increased.

TABLE VI.

*Linseed and Flax seed Imported into the United Kingdom, from Russia and from all Countries, in the Fourteen Years from 1840 to 1853, inclusive.**

Years.	From Russia.	From all Countries.
	Bushels.	Bushels.
1840	2,567,316	3,558,070
1841	2,225,543	2,907,685
	Quarters.	Quarters.
1842	276,020	367,700
1843	342,614	470,539
1844	448,393	616,947
1845	523,309	656,793
1846	404,312	506,141
1847	353,900	439,512
1848	655,776	799,650
1849	482,813	626,495
1850	454,243	608,984
1851	417,950	630,471
1852	518,667	799,402
1853	765,015	1,035,335

* Linseed and flax seed is shipped from the northern ports, and from those in the Black Sea, in proportions varying much in different years; but, on an average, in about equal quantities from each.

On examining these tables together, it will be observed that, as to five of the six articles (grain, hemp, flax, tallow, and bristles),

the supply from other sources has, during the period in view, been increasing faster than the supply from Russia, and, consequently, that there has been a progressive diminution of the extent to which we have been dependent upon that country for a supply. It is also obvious that the increase, such as it is, which has taken place in the imports of all these articles from Russia (excepting tallow) has tended to make the producers of that country somewhat *more* dependent upon the consumption of this country for a remunerative demand.

As to the sixth item, it must be confessed that we are less fortunately placed. The Emperor of Russia is to *bristles* very much what the King of Naples is to *brimstone*—a sort of natural monopolist. It is fortunate the monopolies cannot be exchanged; and that, though we may suffer for a season in our brushes and saddlery, we have not the mortification of seeing a principal ingredient in gun-powder locked up in the hands of such an enemy.

PART IV.—PROBABLE EFFECT OF THE WAR.

Let us now consider how the present war is likely to affect a foreign commerce such as that we have described.

Putting aside the trifling amount of commerce carried on through the ports of the White Sea and the Caspian, we have seen that, speaking in round numbers, about one-half in bulk of the exports of Russia pass through her Baltic ports, and the other half through the ports on the Black Sea. In value, however, the amount of the Baltic trade far exceeds all the rest.

To take the Baltic ports first. Of these we need only mention St. Petersburg, Riga, Revel, Windau, and Liebau. And the two first mentioned are so much more important than the rest, that, for our present purpose, they, too, may be passed over. The share of the trade taken by St. Petersburg and Riga may be safely inferred from the following account of the entries of shipping in the three last years for which the returns have yet been published.

Tonnage of Shipping Entered at the Ports of St. Petersburg and Riga in each of the Three Years 1847, 1848, and 1849.

	1847.	1848.	1849.
	Tons.	Tons.	Tons.
St. Petersburg.....	449,338	313,617	323,252
Riga.....	285,352	163,105	228,983
	734,690	476,722	553,235

It has been shown (*ante* p. 202) that the tonnage entered at *all* the Russian ports on the Baltic in 1847 was 838,046, and in 1848 was 645,836. It appears, then, that in both years St. Petersburg had more than half the trade in point of bulk, and that Riga had about two-thirds of what remained.

It will be here borne in mind that the chief localities of Russian production are not, as in most other countries, upon or near the coast whence the produce is shipped. The goods exported from St. Petersburg and Riga, coming as they do chiefly from the central

provinces before referred to, have to pass a long distance through the interior; but a distance which, from the facility of land-carriage during the winter months, may be almost as easily travelled in one direction as in another. What, then, is the average distance thus intervening between the place of production and the port of shipment? I conceive this may be estimated, in a manner sufficiently accurate for the present purpose, by taking the distance from about the centre of these provinces to the ports in question.

Examination of the map, and of the figures before given, lead us to the city of Moscow itself as probably the most correct common centre that could be chosen for such a purpose. The distance from Moscow to St. Petersburg, in a straight line, is scarcely 400 miles. Practically, the distance passed over between the two cities may be set down at 480. The like distance between Moscow and Riga appears to be about 630 miles; but against the distance of 150 miles further, by land, to Riga is to be set a saving of sea carriage of some two hundred miles, in consequence of Riga being so much nearer than St. Petersburg to the entrance of the Baltic, which is to be passed by nearly all vessels exporting the produce of Russia.

Imperial regulations, however, have brought as much of the trade through St. Petersburg as imperial authority can compel thither. Riga has only the commerce of its own neighbourhood, with so much of that belonging to the more southerly and western provinces of the empire as the government can divert thither from its more easy and natural outlets through the dominions of a neighbouring power.

So much for the export trade of the central districts around Moscow. But there is, as we have seen, another great centre of production around Warsaw. And this is very differently situated. It will be observed that Poland and the neighbouring provinces of Vilna and Grodno are separated from the Baltic coast only by a slip of Prussian territory, some seventy or eight miles wide. Upon the sea-board of this territory, and upon a line the extremities of which are not more than 200 miles apart, are four Prussian ports, *Dantzic, Elbing, Königsburg, and Memel*. A fine navigable river (the Vistula) and its tributaries penetrate the entire kingdom of Poland, and even float thitherward much of produce of Russian Grodno, and Austrian Galicia. And though, during the last thirty years, the Russian government has done all in its power, and not without considerable success, to draw the produce of this district northwards, to ports within its own territory (as Windau and Liebau), the natural course of things is still so far maintained as to render these provinces of Russia mainly tributary, by their commerce, to the ports of East Prussia.

It need scarcely be added that, so long as Prussia remains neutral, her ports will remain open, and the passage of Russian produce, across her frontiers, will be unobstructed. Hence it is to be expected that whatever the Russians may wish to exchange for foreign goods, and can afford to sell at a profit on the frontiers of Prussia, they may continue to produce for exportation, though every port they have on the Baltic be closely blockaded.

Nor does it seem likely that the central provinces will, in the event of a continuance of the war, find the Prussian ports much less

serviceable to them than they are obviously fitted to be to Poland and the neighbouring provinces in the west.

We have already set down the average distance of these central provinces from St. Petersburg at 480 miles, and from Riga at 630 miles. On like data the distance from Moscow to Königsburg cannot be estimated at more than about 800 miles. And against the additional land carriage of 320 miles (as compared with St. Petersburg) there is a distance of some 500 miles saved by sea—Königsburg being at least so much nearer to the Sound than St. Petersburg.

It will also be observed, on consulting a recent map of these countries, that *Cracow*, at the southern extremity of Poland, and *Posen*, but a short distance from the western frontier of that country, are already within the limits of the continental railway system. Goods reaching either of those cities from Russia are in immediate communication with Stettin, Hamburg, and all the Dutch and Belgian ports; and depôts of foreign produce, formed at either city, and destined for Russian consumption, might be rapidly supplied by steam transit from any of the ports of England, France, Belgium, Holland, or Prussia, and the goods easily placed *en route* for Warsaw, St. Petersburg, or Moscow.

When the projected lines from Dantzic to Posen, and from Posen direct to Cracow, shall be completed, the exportable produce of Poland and Galicia must tend to seek a railway route to Dantzic or Hamburg, or even to Ostend: a tendency operating directly in proportion to the value and the portability of the produce.* But whether this tendency of the German railway system to draw westward the trade, now, by the imperial system of Russia, drawn northwards to Riga or St. Petersburg, or southwards to Odessa, will be permitted to operate with any degree of freedom, must depend much upon the duration and the issue of the present struggle. That while hostilities continue, and the Prussian frontier remains passable, the more free and natural course of trade will be permitted by the Czar for his own sake, though to the detriment of the imperial system, is obvious: a benefit to the cause he fights against, which may, for the present, reconcile us to the equivocal attitude of one of the four powers.

So long, then, as Prussia remains neutral, the eastern half of that country, as it obviously possesses the coast-line naturally appendent to the kingdom of Poland, and to the Russian provinces immediately adjoining that kingdom on the east, may be expected to afford a passage for the trade of these provinces, with all the ease, and all the willingness, with which mercantile men, who have long seen trade diverted from its natural channel through their own hands, see it come back in consequence of the temporary weakness of the disturber.

From the ports of the Black Sea, the only regular supplies we

* From Cracow to Dantzic, and thence to the Thames, would be about 400 miles of rail, and 1,200 of sea. From Cracow to the Thames, by Hamburg, about 500 miles of each. And between the same points, by Ostend, adds some 250 miles more of rail, but shortens the entire distance by at least 100 miles. At present, the corn of Galicia, if shipped at Odessa, has 300 or 400 miles of inland carriage, and a troublesome sea voyage of some 4,000 miles. Polish corn, shipped at Dantzic, reaches that port by 200 or 300 miles of interior carriage, chiefly down the Vistula; and thus encounters an intricate navigation of at least 1,200 miles.

receive are of corn and seeds, with a small quantity of wool and tallow, and a few articles of no importance—as the following list of our imports thence, in 1849 and 1850, will sufficiently show:—

Articles Imported into the United Kingdom from Russian Ports within the Black Sea in the Years 1849 and 1850.

	1849.	1850.
Bristles..... lbs.	....	2,132
Cheese cwts.	2	....
Coffee lbs.	86	82
Wheat qrs.	546,501	569,479
Other corn „	26,234	19,897
Currants and figs..... cwts.	27	6
Flax „	60	....
Hemp ..... „	....	473
Hides „	36	....
Iron tons	12	15
Madder root..... cwts.	100	....
Opium lbs.	871	....
Linseed and flax seed qrs.	45,979	133,447
Rape seed „	1,924	10,185
Tallow cwts.	108,287	12,471
Tea lbs.	38	....
Tobacco „	30	39
Wine..... galls.	76	19
Timber loads	41	39
Wool..... lbs.	4,786,120	2,632,639

Corn, wool, and tallow, then, are the only articles with regard to which an entire stoppage of our trade with the Russian ports of the Black Sea would affect this country. And how insignificant such a stoppage would be to us may be inferred from the following comparison of the quantity of each of these three articles imported thence in the two years 1849 and 1850, with the quantity of each imported into this country from all parts of the world in the same year:—

	Imported from Russian Ports in the Black Sea.	Total Quantity Imported into the United Kingdom.
	1849.	1849.
Corn qrs.	572,735	10,669,661
Wool..... lbs.	4,786,120	76,768,647
Tallow cwts.	108,287	1,465,629
	1850.	1850.
Corn qrs.	589,250	9,019,590
Wool lbs.	2,632,639	74,326,778
Tallow cwts.	12,471	1,240,645

Assuming the trade, on an average of years, to be fairly represented by these figures, the *corn* would form only about 6 *per cent.*, the *wool* about 3 *per cent.*, and the *tallow* from 1 to 7 *per cent.* of all we have been accustomed to import.

But, reverting to what has been said of the facilities for interior carriage in Russia, and of the great distances over which nearly all the exportable produce of the country must be carried before it reaches the place of shipment, we may safely infer that the greater part of the produce now shipped in the Black Sea would, were that outlet closed to it for more than one season, find its way to the shores of the Baltic. It is also to be borne in mind that the Russian export trade of the Black Sea is chiefly concentrated at Odessa; that that port is supplied from the country west of the Dnieper, and drained by that river and the Bug and the Dniester; and that this, the most fruitful part of the Russian dominions on the Black Sea, is at once most open to the means of transport to the Baltic already in use for Galicia and Poland, and is also the territory obviously most likely to be occupied by the allies of Turkey, in the event of a protracted contest, and an advance by the allies upon the most recently acquired and most southern dominions of Russia.

Were this paper not already quite long enough to be brought before the Society at one meeting, I might be permitted to strengthen the views here suggested by reference to a former occasion of a somewhat similar nature. The ports of Russia were formally closed to our commerce, under treaty with France, from October, 1807, to July, 1812. The German powers may be supposed to have been at least as willing as Russia to enforce this prohibition, their ports being similarly closed at the same time. But the official accounts of the period go far to show that the interruption of the trade between this country and Russia was, after the first year or two, not very great.* It is true that the circumstances of the two periods are, in some important respects, widely different; but the difference, I conceive, is almost entirely such as to favour the conclusion to which the facts I have brought forward seem most directly to point.

* On the 7th of July, 1807, the treaty of Tilsit was signed. By this act, Russia detached herself from England and joined France, undertaking to mediate between England and France, and, if the mediation were refused, to close her ports to British commerce. On 31st October following (the season being over), the ports of Russia were closed accordingly. On 10th February, 1808, Russia declared war against Sweden, for not co-operating in excluding British vessels from the Baltic. But Russia soon ceased to act heartily on the French system. The nobles preferred selling the raw produce of their estates to seeing it rot in aid of Napoleon's crusade against British commerce. They also lacked tropical produce, and the means of paying for it. So the trade continued, though partially in neutral bottoms and at increased cost. On the 18th of July, 1812, Russia made peace with Great Britain. The following summary will show how far the average annual amount of the trade between the two countries varied under these circumstances:—

Exports.—Official value, from Great Britain to Russia, during the *five* years, 1803–7, average annual amount, 1,471,000*l.* In the *four* years of war, 1808–11, 720,564*l.* In the *five* years, 1812–17 (the records for 1813 being destroyed), 1,768,000*l.*

Imports.—Official value, from Russia into Great Britain, during the five years, 1801–7, 2,454,000*l.* In the four years of war, 1808–11, 1,778,000*l.* In the five years, 1812–17, 2,117,000*l.*

It will be observed that these values, being taken by fixed official prices, are unaffected by the actual variations of price, and so may be regarded simply as indications of *quantity*, and so compared. And the figures given, referring only to the trade officially recorded as carried on between the two countries, may be supposed to exclude, during the first years of the war, much that passed through neutral channels.

This conclusion may be stated in a few words. It is that, while Prussia remains neutral, the efforts we make to put a stop to commercial intercourse between Russia and the rest of the world, will result in little more than transferring to Prussian ports the greater part of the trade hitherto carried on through the ports of Russia.*

The *people* of Russia would suffer from such a transfer mainly in the annoyance and loss always incident to an obstruction or disturbance of the ordinary channels of traffic—the *nobles or landowners* in a lower price obtained for their exportable produce, and a higher price paid for imported comforts and luxuries—and the *government* in a partial loss of the revenue derived from trade, and such a restoration of the main commerce of the country to its natural outlets as cannot but postpone, if it do not ultimately prevent, the realization of the despotic scheme which makes St. Petersburg, in spite of nature, the capital city and chief port of the empire.

The sufferings of the people will, at worst, be temporary; for, could the transfer continue but a few years, it would confer all the countervailing benefits of a more natural state of things; while the damage done to the artificial system of the government would be certain, considerable, and probably irreparable. But England and

* Since this paper was read, a gentleman who was present on that occasion has written to Prussia on the subject. I have been favoured with a copy of the correspondence, “corroborating very decidedly” the conclusion here expressed. The following is an extract from the letter of a mercantile firm, dated “Dantzic, 5 July, 1854”:

“In reply to your query about the Russian trade taking its way to East Prussia in consequence of the war with Russia continuing, as well as the neutrality of Prussia, we beg to express our opinion that this will be decidedly the case, inasmuch as it is already, since the beginning of the year, organised to some extent. The goods destined for Riga and Petersburg are mostly sent on to *Memel*, some few to *Königsburg*, from which places the *caravan system* has been adopted, and is carried on with a great deal of regularity. The goods thus sent from England consist, for the most part, of cotton (raw material) and colonial produce, *coffee*, sugar, tea, &c., whilst *coals*, of which Russia seems most in want, find this conveyance of course far too dear. The St. Petersburg and Riga houses send in return, by the same waggons, their produce, such as hemp, tallow, flax, linseed, and grain, to their *Memel* agents, who follow their orders in directing the stuff to the various ports of England, France, Holland, and Belgium. Thus the Prussian merchants earn a very good commission, and it appears that at least present prices allow of this trade being continued on a large scale. There is such a want of warehouses at *Memel* that rents are excessively high, and we understand a good deal of merchandise is warehousing in open yards. There is only one article of Russian produce which cannot reach Prussia for being sent through her ports to England and France, and for which yet there is a great want. We refer to *wood*, the fine timber and masts from Riga, the St. Petersburg deals and battens. Only a few parcels of masts seek their way through the small river *Narew* into the *Vistula*, and thus come to Dantzic. The Russian timber trade, however, speaking generally, may be considered as paralysed.”

We declared war against Russia on the 28th of March last. At that date the usual winter arrangements for transmission of produce from the interior to the sea-ports were complete. The produce was either already warehoused in St. Petersburg and Riga, or well on its way thither. When the blockade of these ports began the snow was gone. To carry the produce thus awkwardly placed, from St. Petersburg and Riga down to the ports of East Prussia, carriage by waggons became necessary; and these were found equally necessary to carry the corresponding imports up to St. Petersburg. Hence the state of things described in the above letter. But if the war continues till next spring, we shall doubtless see the present year's produce brought direct, during the winter, from the places of production to the ports of East Prussia nearest to these places, thus realising more precisely, and in a more regular form, the anticipations expressed in the text.—J. T. D.

France in arms will hardly permit a new settlement of the channels of trade between Russia and her neighbours, anterior to a general peace. A state of war must be a state of change—achieved or expected—and in either case is destructive of that confidence in the future which is of the essence of all settled mercantile arrangements. Should Austria frankly join and strongly act with the allies, and should the resistance of Russia continue, it is more than probable that Russia will, during the next twelve months, have to retreat not only from the invaded provinces, but from the Crimea, and the whole line of coast from Azof to the mouths of the Danube. Were such a position to be attained by the allies, and Prussia still to remain neutral, the entire trade of Russia, westward, would be carried on over the Prussian frontiers, much to the profit of the government and people of that country. In view of this state of things, St. Petersburg and Riga, already useless as ports, and all the Russian ports on the Black Sea, might be destroyed without materially affecting the commercial pressure of the war upon the Czar. Russia would be surrounded by a circle of belligerents, broken only by the intervention of a single neutral state—that state, however, being singularly well placed for carrying on the obstructed trade of the beleaguered state. And in the event, said to have been already threatened by the Czar, of a final retreat upon the central provinces, and the allies permitting the war to resolve itself, as they then probably would, into a mere shutting up of the general disturber, by holding in possession every avenue between Moscow and civilized Europe, the neutrality of Prussia would become the sole hope of the enemy, and, in all probability, the sole obstacle to peace. Nor would the removal of this obstacle be a matter of slight import. Small as is the commerce of Russia, it is much greater now than it was forty years ago; and could not be entirely stopped without causing much suffering among some who, even in Russia, are not apt to suffer in silence. Hemmed into the central provinces, the Czar would be driven to rely for support mainly upon the ancient land-holding, as distinguished from the modern office-holding, aristocracy. And when the imperial perseverance in schemes of territorial aggrandisement, which have always, under the family of Romanoff, been closely linked with other schemes for suppressing the influence of these ancient nobles, shall produce an entire stoppage of the incomes they derive from the exportation of hemp, flax, and tallow, an explosion may be looked for of the direction of which Russian history has already furnished several examples.*

If, then, in the last extremity, we should be met by a repetition of the plan so much vaunted for its success against the French in 1812, it may become expedient effectually to *blockade* instead of *penetrating* the empire; and therefore to compel the abandonment of any “neutrality” opposed to this policy.

* “As for any revolutions which could possibly arise out of the discontent of the old aristocracy, we may be assured they will never be directed against the political and moral system of the country; they will always be, as they have always been, aimed solely against the individual at the head of the government. Conspiracies of this kind are the only ones now possible in Russia.”—Xavier H. de Hell, “Travels in the Steppes of the Caspian Sea.” Chap. xiv.

Analytical View of Railway Accidents. By F. G. P. NEISON, Esq.*(Continued from page 337, vol. xvi.)*[Read before the Statistical Section of the British Association, at Hull,
on Monday, 14th September, 1853.]

IN the preceding portion of this paper, a very complete analysis was given of railway accidents as they affected passengers; and it is now proposed to investigate the manner in which railway employes themselves suffer from accidents while following their avocations.

Some difficulty was experienced in this part of the inquiry owing to the obscurity which obtained as to the precise number of persons employed in different departments of the railway service during the earlier years to which the investigation relates. Since 1848, however, several parliamentary returns afford the means of making a near approximation to the number of persons employed in the different departments, and hence offer a ready means by which to determine the numbers constantly exposed to the risk of accidents.

From the data in the following Table, XXXI., these numbers are easily deduced.

The returns which furnish the data for the two last columns of this table were issued subsequent to the preparation of the principal part of this paper; but it will be found that the principle on which the table has been constructed produces results almost identical for practical purposes with those given in the parliamentary returns themselves.

Table XXXII. exhibits the number of employes of different descriptions exposed continuously to the risk of accidents. The principle on which it has been constructed from the data contained in Table XXXI., is obvious.

By the aid of Tables XXXI. and XXXII., Table XXXIII. has been calculated, so as to show for precisely the same periods of time to which the data given in the preceding paper relate, the number of employes exposed to risk, thus preparing the different elements entering into this inquiry in a fitting shape, from which to determine the relation of the one to the other. The mode by which these figures have been obtained from Tables XXXI. and XXXII., will be at once understood on a careful perusal.

This table will be found exceedingly useful for future reference by those giving attention to the economics of our railway system generally, as well as to those who may direct their attention to the special object of this inquiry. The next Table, XXXIV., will complete the principal series of elementary facts which enter into the present part of this investigation. The details as to deaths and injuries will be found in Table XII., page 305, of vol. xvi.; and those in regard to the numbers exposed to the risks of accidents will be found as already stated in the three preceding Tables, XXXI., XXXII., and XXXIII.

It will frequently be necessary to refer to the facts set forth in Table XXXIV.; but, for the immediate purpose of determining the ratio of deaths and injuries from all causes or kinds of railway accidents amongst employes, compared with the ratio found in the preceding paper to prevail amongst passengers, Table XXXV. will be convenient.

TABLE XXXI.
Number and Description of Persons Employed on all Railways open for Traffic in Great Britain and Ireland.

Class of Persons.	On 1st May, 1848.	On 30th June, 1848.	On 30th June, 1849.	On 30th June, 1850.	On 30th June, 1851.	On 31st Dec., 1851.	Total from 30th June, 1848, to 31st Dec., 1851.	On 30th June, 1852.	On 30th June, 1853.
Superior officers (<i>g</i>)	6,298	6,468*	7,490	8,298†	9,106	9,510‡	28,330§	8,702	9,949
Engine-men, or Drivers	1,752	1,764	1,839	2,049	2,258	2,363	7,080	2,397	2,821
Assistant Engine-men, or Stokers	1,809	1,818	1,871	2,129	2,387	2,516	7,360	2,460	2,869
Conductors, or Guards	1,496	1,515	1,631	1,941	2,252	2,407	6,660	2,257	2,641
Artificers (<i>a</i>)	10,814	10,813	10,809	11,636	12,463	12,876	40,521	13,878	15,624
Switchmen (<i>b</i>)	1,058	1,127	1,540	1,703	1,865	1,946	5,711	1,605	2,223
Policemen (<i>c</i>)	2,475	2,337	1,508	1,553	1,599	1,622	5,841	1,567	1,542
Porters and Messengers	7,559	7,656	8,238	9,007	9,776	10,160	31,041	10,434	12,188
Plate-layers (<i>d</i>)	4,391	4,551	5,508	5,557	5,605	5,629	18,557	4,909	6,033
Labourers (<i>e</i>)	14,438	14,380	14,029	14,419	14,810	15,005	50,551	13,682	18,987
Miscellaneous (<i>f</i>)	598	728	1,505	1,474	1,442	1,426	4,777	2,626	2,069
<i>a + b + c + d + e + f + g</i> and others	40,072	40,403	42,389	44,639	46,890	48,015	154,082	50,053	59,890

The figures of the 3rd, 5th, and 7th columns are thus derived, viz.:—

* As 14 months $\left(\begin{smallmatrix} \text{1st May, 1848,} \\ \text{to} \\ \text{30th June, 1849,} \end{smallmatrix} \right) : 1,192 = \left\{ \begin{smallmatrix} \text{7,490—6,298} \\ \text{or} \\ \text{increase in} \\ \text{that time} \end{smallmatrix} \right\} :: 2 \text{ months } \left(\begin{smallmatrix} \text{1st May, 1848,} \\ \text{to} \\ \text{30th June, 1848,} \end{smallmatrix} \right) : \text{increase in that time} = 170. \text{ Then}$

$$6,298 + 170 = 6,468.$$

$$+ 8,298 = \frac{7,490 + 9,106}{2}.$$

‡ As 24 months $\left(\begin{smallmatrix} \text{30th June, 1849,} \\ \text{to} \\ \text{30th June, 1851,} \end{smallmatrix} \right) : 1,616 = (\text{increase}) :: 6 \text{ months } \left(\begin{smallmatrix} \text{30th June, 1851,} \\ \text{to} \\ \text{31st Dec., 1851,} \end{smallmatrix} \right) : \text{increase} = 404. \text{ Then } 9,106 + 404 = 9,510.$

§ See Table XXXII. (Note †).

TABLE XXXIII.
Number and Description of Employés exposed to Risk in the undermentioned Years.

DATE.	1. Superior Officers. (g)	2. Engine Men.	3. Stokers.	4. Guards.	5. Artificers. (a)	6. Switch- men. (b)	7. Police- men. (c)	8. Porters.	9. Plate- layers. (d)	10. Labourers. (e)	11. Miscel- laneous. (f)	12. $a+b+c+d+e+f+g$.
Last 5 mths. of 1840	824	208	216	193	1,201	164	184	911	538	1,515	135	4,581
Year 1841	2,243	566	587	525	3,270	446	501	2,480	1,518	4,122	368	12,468
" 1842	2,449	618	641	573	3,570	487	547	2,708	1,657	4,501	402	13,613
" 1843	2,588	659	683	611	3,805	519	583	2,886	1,766	4,797	429	14,487
Total ...	8,104	2,051	2,127	1,902	11,846	1,616	1,815	8,985	5,499	14,935	1,334	45,149
Year 1844	2,787	709	735	658	4,096	559	627	3,107	1,901	5,163	461	15,593
" 1845	3,211	809	845	751	4,681	638	716	3,550	2,173	5,901	527	17,847
" 1846	3,677	928	962	860	5,273	731	820	4,065	2,488	6,757	604	20,350
" 1847	4,807	1,212	1,258	1,125	7,008	956	1,073	5,315	3,253	8,835	789	26,721
Total ...	14,482	3,658	3,800	3,394	21,058	2,884	3,236	16,037	9,815	26,656	2,381	80,511
Year 1848	6,468	1,764	1,818	1,515	10,813	1,127	2,337	7,656	4,551	14,380	728	40,404
" 1849	7,490	1,839	1,871	1,631	10,809	1,540	1,508	8,238	5,508	14,029	1,505	42,389
" 1850	8,298	2,049	2,129	1,941	11,636	1,703	1,553	9,007	5,557	14,419	1,474	44,640
" 1851	9,106	2,258	2,387	2,252	12,463	1,865	1,599	9,776	5,605	14,810	1,442	46,890
Total ...	31,362	7,910	8,205	7,339	45,721	6,235	6,997	34,677	21,221	57,638	5,149	174,323
Total of 3 periods.	53,948	13,619	14,132	12,635	78,625	10,735	12,048	59,699	36,535	99,229	8,864	299,983
Year 1852	9,609	2,446	2,537	2,269	14,136	1,928	2,163	10,722	6,561	17,827	1,592	53,897
Grand Total....	63,557	16,065	16,669	14,904	92,761	12,663	14,211	70,421	43,096	117,056	10,456	353,880

TABLE XXXIV.

Showing the Per-Centage of Deaths and Injuries amongst each class of Railway Employés during the last Five Months of 1840, and during each year down to 1853.

Year.	Engine Drivers.					Stokers.					Guards.					Porters.					Other Servants.				
	Number Exposed.	Killed.	Injured.	Per-Centage of Deaths.	Per-Centage of Injuries.	Number Exposed.	Killed.	Injured.	Per-Centage of Deaths.	Per-Centage of Injuries.	Number Exposed.	Killed.	Injured.	Per-Centage of Deaths.	Per-Centage of Injuries.	Number Exposed.	Killed.	Injured.	Per-Centage of Deaths.	Per-Centage of Injuries.	Number Exposed.	Killed.	Injured.	Per-Centage of Deaths.	Per-Centage of Injuries.
1840...	208	1	6	.181	.285	216	1	5	.463	.2315	193	1	3	..	1.036	911	1	6	..	1.10	4,581	31	8	262	.175
1841...	566	1	4	.177	.707	587	..	4	.624	.682	525	1	5	2	..	952	3,107	6	4	.161	12,468	23	38	.181	.141
1842...	618	2	4	.324	.647	611	2	5	.624	.780	573	7	7	3	.111	.074	2,480	4	3	.111	13,613	27	22	.198	.162
1843...	659	3	4	.455	.607	653	3	5	.693	.732	611	5	9	4	.277	.139	2,856	8	4	.277	14,487	21	13	.145	.090
1844...	2,051	7	18	.341	.875	2,127	7	19	.329	.893	1,902	13	11	9	.083	.578	8,985	16	9	.178	45,119	83	61	.184	.135
1845...	709	7	6	.989	.846	735	6	12	.816	1.633	658	5	6	7	.760	.912	3,107	6	4	.193	15,593	28	17	.180	.109
1846...	809	8	5	.371	.618	845	7	8	.828	.947	751	6	7	7	.799	.933	3,550	6	2	.169	17,847	36	23	.202	.129
1847...	928	7	14	.754	1.509	962	7	11	1.163	1.144	860	9	9	9	1.046	1.046	4,065	7	7	.173	20,350	61	35	.300	.172
1848...	1,212	11	6	.916	.493	1,258	22	17	1.749	1.351	1,125	10	9	9	.889	.800	5,315	12	4	.226	26,721	67	31	.251	.116
1849...	3,658	28	31	.765	.847	3,800	42	48	1.105	1.263	3,394	30	31	31	.884	.913	16,037	31	17	.193	80,511	192	106	.228	.131
1850...	1,704	6	11	.340	.624	1,818	14	14	.770	.770	1,515	22	10	10	1.452	.660	7,656	10	6	.131	40,404	86	33	.213	.082
1851...	1,839	6	8	.326	.435	1,871	13	7	.695	.874	1,651	15	14	14	.920	.828	8,238	13	8	.158	42,389	82	41	.193	.097
1852...	2,049	4	11	.195	.536	2,129	16	8	.752	.876	1,941	21	15	15	1.082	.773	9,007	9	5	1.00	44,610	79	22	.177	.049
1853...	2,258	11	5	.487	.321	2,387	6	10	.251	.418	2,252	14	3	3	.622	.133	5,776	19	11	.194	46,890	63	21	.134	.045
1854...	7,910	27	35	.341	.442	8,205	49	39	.597	.475	7,339	72	42	42	.981	.572	31,677	51	30	.147	174,323	310	117	.178	.067
1855...	2,446	11	10	.449	.409	2,537	18	17	.709	.670	2,269	12	16	16	.529	.705	10,722	19	9	.177	53,897	63	37	.117	.069
1856...	13,619	62	84	.455	.617	14,132	98	106	.693	.705	12,635	115	84	84	.910	.665	59,699	98	56	.164	299,983	555	284	.195	.095
1857...	16,065	73	94	.454	.585	16,669	116	123	.695	.738	14,904	127	100	100	.852	.671	70,421	117	65	.166	353,880	648	321	.183	.091

TABLE XXXV.

Number and Ratio of Deaths and Injuries from all Causes among Employés.

Period.	Engine Drivers.			Ratios.	
	Number.	Killed.	Injured.	One Killed in	One Injured in
7th Aug. 1840 to 1843	2,051	7	18	293	114
„ 1844 „ 1847	3,658	28	31	131	118
„ 1848 „ 1851	7,910	27	35	293	226
„ 1840 to 1851	13,619	62	84	220	162
„ 1852	2,446	11	10	222	245
Grand Total	16,065	73	94	220	171

Period.	Stokers.			Ratios.	
	Number.	Killed.	Injured.	One Killed in	One Injured in
7th Aug. 1840 to 1843	2,127	7	19	304	112
„ 1844 „ 1848	3,800	42	48	90	79
„ 1848 „ 1851	8,205	49	39	168	210
„ 1840 to 1851	14,132	98	106	144	133
„ 1852	2,537	18	17	141	149
Grand Total	16,669	116	123	144	136

Period.	Guards.			Ratios.	
	Number.	Killed.	Injured.	One Killed in	One Injured in
7th Aug. 1840 to 1843	1,902	13	11	146	173
„ 1844 „ 1847	3,394	30	31	113	109
„ 1848 „ 1851	7,339	72	42	102	175
„ 1840 to 1851	12,635	115	84	110	150
„ 1852	2,269	12	16	189	142
Grand Total	14,904	127	100	117	149

Period.	Porters.			Ratios.	
	Number.	Killed.	Injured.	One Killed in	One Injured in
7th Aug. 1840 to 1843	8,985	16	9	562	998
„ 1844 „ 1847	16,037	31	17	517	943
„ 1848 „ 1851	34,677	51	30	680	1,156
„ 1840 to 1851	59,699	98	56	609	1,066
„ 1852	10,722	19	9	564	1,191
Grand Total	70,421	117	65	602	1,083

TABLE XXXV.—*Continued.*

Period.	Other Servants.			Ratios.	
	Number.	Killed.	Injured.	One Killed in	One Injured in
7th Aug. 1840 to 1843	45,149	83	61	544	740
„ 1844 „ 1847	80,511	192	106	419	760
„ 1848 „ 1851	174,323	310	117	562	1,490
„ 1840 to 1851	299,983	585	284	513	1,056
„ 1852	53,897	63	37	856	1,457
Grand Total	353,880	648	321	546	1,102

From this Table, it will be seen that the ratio of deaths per annum amongst different classes of employés for the whole period of years, now under consideration, has been as follows, viz.:—

The ratio of deaths per annum among	Engine-Drivers	=	1 in 220
„	„	Stokers	= „ 144
„	„	Guards	= „ 117
„	„	Porters	= „ 602
„	„	Other Servants	= „ 546

It is thus evident that, for the whole period from 1840–52, the ratio of deaths has been, amongst the first three classes of servants, least in the group engine-drivers, and highest in that of guards. A similar result also appeared in Table XXXIV. This relation, however, of the mortality from accidents has not been uniformly maintained by the same three classes throughout the whole of the period under observation, as will be seen by a comparison of the mortality of stokers with that of guards for the period 1844–48. The mortality of the fourth and fifth groups of employés differs widely from that of the other three groups; and the same remark is applicable to the ratio of injuries in the same groups.

The ratio of injuries being among	Engine-Drivers	=	1 in 171
„	„	Stokers	= „ 136
„	„	Guards	= „ 149
„	„	Porters	= „ 1,083
„	„	Other Servants	= „ 1,102

In respect to deaths, the ratio for stokers was intermediate between that for engine-drivers and guards; but so far as injuries are concerned, the ratio for stokers is higher than that for either guards or engine-drivers.

It will assist the object of this inquiry to consider the facts of the preceding Table, as given in the following condensed summary:—

ABSTRACT N.

PERIOD.	Engine Drivers, Stokers, and Guards.			Ratios.	
	Number.	Killed.	Injured.	One Killed in	One Injured in
1840 to 1843 ...	6,080	27	48	229	129
1844 „ 1847....	10,852	100	110	109	99
1848 „ 1851....	23,454	148	116	158	200
1840 to 1851....	40,386	275	274	147	148
1852	7,252	41	43	177	169
Grand Total ...	47,638	316	317	151	150

PERIOD.	Porters and Other Servants.			Ratios.	
	Number.	Killed.	Injured.	One Killed in	One Injured in
1840 to 1843....	54,134	99	70	547	773
1844 „ 1847....	96,548	223	123	433	785
1848 „ 1851....	209,000	361	147	579	1,422
1840 to 1851....	359,682	683	340	527	1,058
1852	64,619	82	46	788	1,405
Grand Total ...	424,301	765	386	555	1,099

This abstract presents facts of a very remarkable nature when compared with those given in Abstract H, page 306, of the former paper. In the preceding abstract, it will be seen that, in the first group of employes, consisting of engine-drivers, stokers, and guards, the numbers of injuries and deaths are almost identical, while amongst passengers (see Abstract O) the ratio of injured to killed was 675·20 per cent.

In regard, however, to the group consisting of porters and other servants, the number killed has been 1 in 555, and the number injured has been 1 in 1,099; or the ratio of injured to killed about 50·04 per cent.

In this way of looking at the question, some results are disclosed, and which merit important consideration.

ABSTRACT O.

Class.	Numbers.		Ratio of Injured to Killed.
	Killed.	Injured.	
Engine-Drivers, Stokers, and Guards....	316	317	About equal
Porters and other Servants.....	765	386	50·46 per cent.
Passengers	266	1,796	675·20 „

There appears in this abstract a very curious law, but one

which, on reflection, is quite consistent with the circumstances known to influence the risk to which each class of persons is exposed. By viewing, in connection with the preceding results, some of the facts set forth in Abstract O, the following conclusions are arrived at:—

ABSTRACT P.

Class of Persons exposed to Risk.	Numbers.		Ratio of the Injured to Killed.
	Killed.	Injured.	
Trespassers	306	84	27·45 per cent.
Public by their own negligence	175	65	37·14 „
Other Servants	648	321	49·54 „
Porters and other Servants.....	765	386	50·46 „
Porters.....	117	65	55·56 „
Engine-Drivers, Stokers, and Guards...	316	317	About equal
Passengers	266	1,796	675·20 „

A very slight consideration of the nature of the circumstances, under which the accidents take place in each of the above classes, will at once explain the great disparity between the ratio of the killed and injured. If the different circumstances in which the two classes of trespassers and passengers be contrasted, it will at once appear that, in the event of an accident occurring, the chances of its proving fatal differ widely in the two groups; the former being injured principally by trains overtaking them while in motion, and consequently the probability of the accident proving fatal is very great; but, in regard to the latter, it has been shown in Table IV., that the bulk of accidents to passengers take place under circumstances of a much less violent nature, and in which the tendency to be fatal is quite inconsiderable compared with the accidents to which trespassers are liable. Of the 297 defined causes of fatal accidents to trespassers recorded in Table VI., no less than 268 are assignable to the cause “run over;” while, of the 228 fatal accidents to passengers, 99, or 43·42 per cent., have been occasioned by collisions of trains, and trains running off the line. Accidents of this kind, it will be found, are of a less violent nature than any other, and have, therefore, less tendency to be fatal; and if these facts be kept distinctly in view, the great disparity in the relative fatality of accidents in different classes, as shown in Abstract P, will be readily understood. The following illustration of the tendency of different classes of accidents, so far as passengers are concerned, to prove fatal may be interesting and instructive on this point of the inquiry:—

ABSTRACT Q.

Ratio of Injured to Killed amongst Passengers from different causes.

Causes.	Killed.	Injured.	Ratio of Injured to Killed.
Collisions, running off line, and collision at station	99	1,505	1520·20 per cent.
All other defined causes	129	230	178·29 „

Accidents from the last group of causes, it will be seen, are of a much more fatal character than those in the first group; and an inspection of the causes, included in the last of the above groups, will show that they are of a kind more in common with those which affect railway servants in general, than the causes contained in the first group, and hence the explanation of the disparity exhibited in Abstract P preceding.

Abstract R gives a succinct view of the liability of different classes of persons to be injured by accidents from various causes, and also the chances of those accidents proving fatal; and it will be seen, that, in the following classes, the great bulk of the accidents take place under circumstances in which the cause of injury is of a very violent nature, and can, with few exceptions, be scarcely otherwise than fatal:—

Of all the deaths amongst	Trespassers	90·24 per cent.	Have occurred from being run over by trains.
	Public by their own negligence	88·66 „	
	Other Servants ..	61·50 „	
	Porters	30·39 „	

Again, it will be seen, that, in the following classes, the accidents also taking place under circumstances likely to be fatal:—

Of the deaths among	Engine-Drivers	46·03 per cent.	Are caused by “Running off the Line” and “Falling from Train.”
„	„	Stokers	
„	„	Guards	
„	„	Porters	

These facts are sufficient to account for the tendency of different kinds of accidents, as they affect different classes of persons, to prove fatal. In Abstract Q, it will be found, that accidents to passengers from “collisions,” “running off the line,” and “collisions at stations,” were much less fatal than those taking place from other causes; so also will it be found that, amongst the three important classes of railway servants, engine-drivers, stokers, and guards, is the tendency of accidents, from the same three causes, much less fatal than from other causes.

ABSTRACT R.

Number of Deaths from each cause amongst different classes, also the Ratio of Deaths from each cause to the Total Deaths from all causes for the whole period, 1840-52.

Cause.	Passengers.		Public by their own Negligence.		Trespassers.		Engine-Drivers.		Stokers.		Guards.		Porters.		Other Servants.	
	Number Killed.	Ratio.	Number Killed.	Ratio.	Number Killed.	Ratio.	Number Killed.	Ratio.	Number Killed.	Ratio.	Number Killed.	Ratio.	Number Killed.	Ratio.	Number Killed.	Ratio.
Collision	29	12.72	...	...	...	...	6	9.52	8	7.92	3	3.34	...	...	11	1.92
Off line	35	15.35	...	...	...	...	19	30.16	13	12.87	6	6.67	1	.98	6	1.05
Running into station ...	5	2.20	...	...	...	...	1	1.59	...	...	...	...	...	...	...	...
Axle breaking	6	2.63	...	...	...	...	...	...	...	...	...	...	...	...	4	.70
Machinery breaking ...	2	.88	...	...	1	.34	7	11.11	11	10.89	1	1.11	...	...	5	.86
Falling from train	16	7.02	6	4.00	8	2.69	10	15.87	28	27.72	37	41.11	10	9.80	56	9.76
Jumping from train ...	34	14.91	4	2.67	1	.33	3	4.76	5	4.95	2	2.22	6	5.89	24	4.18
Run over	22	9.65	133	88.66	268	90.24	4	6.35	11	10.89	13	14.44	31	30.39	353	61.50
Collision at station	35	15.35	...	...	...	...	6	9.53	5	4.95	4	4.45	4	3.92	8	1.39
Mounting train in motion	39	17.10	3	2.00	10	3.37	4	6.35	7	6.94	10	11.11	9	8.83	35	6.10
Crushed	5	2.19	4	2.67	9	3.03	3	4.76	13	12.87	14	15.55	41	40.19	72	12.54
Total	228	100.00	150	100.00	297	100.00	63	100.00	101	100.00	90	100.00	102	100.00	574	100.00
Miscellaneous	38	...	25	...	9	...	10	...	15	...	37	...	15	...	74	...

ABSTRACT S.

Ratio of Injured to Killed amongst Engine Drivers, Stokers, and Guards, from different causes.

Causes.	Killed.	Injured.	Ratio of Injured to Killed.
Collisions, running off line, and collisions at stations.....	70	118	168·57 per cent.
All other causes	246	199	80·89 „

It is hence obvious, not only as regards employés, but also passengers, that accidents from “collisions,” and from “running off the line,” are neither so frequent nor so fatal as has been hitherto so generally believed by the public.

The next point connected with this part of the inquiry, to which attention is directed, is the relative frequency of fatal accidents in recent and more remote years; and, for the purpose of ascertaining how far the tendency to fatal accidents has increased or diminished amongst employés, the following abstract has been prepared, which shows the deaths from all causes in the aggregate among:—

ABSTRACT T.

Period.	Engine Drivers, Stokers, and Guards.			Porters and other Servants.		
	Number Exposed to Risk.	Killed.	One Killed in	Number Exposed to Risk.	Killed.	One Killed in
1840 to 1843....	6,080	27	225	54,134	99	547
1844 „ 1847....	10,852	100	109	96,548	223	433
1848 „ 1851....	23,454	148	158	209,000	361	579
1852	7,252	41	177	64,619	82	788
1840 to 1852....	47,638	316	151	424,301	765	555

When a similar investigation was made into the relative frequency of fatal accidents to passengers, in Abstract H, it was most satisfactory to find so rapid and so decided a diminution of them in recent years. But, although in the present instance it would appear that, among railway servants, the mortality from accidents was not so high in the first as in the period immediately succeeding, still it is gratifying to find a still more marked and decided diminution in the rate of mortality among railway servants since the year 1844, than has even taken place amongst passengers. According to Abstract H, it will be found that the decrease in mortality of passengers, within the same period, was in the ratio of 230 to 289; while, amongst the group engine-drivers, stokers, and guards, the decrease has been in the ratio of 109 to 177; but if the ratio had been in accordance with that for passengers, it would have been as 109 to 137 only. Again, in the group porters and other servants, the decrease of mortality has been as 433 to 788; but if the ratio had been the same as that for passengers, it would have been as 433 to 544 only. It will thus be seen that the diminution of fatal accidents among the

second group of railway servants is somewhat greater than in even the first group.

Few, if any persons, were, until recently, distinctly aware of the great diminution of fatal accidents amongst railway passengers; but the facts in Abstract H, of the former paper, have now sufficiently established the truth of the great improvements in this respect of railway travelling in recent years; and the evidence now brought forward in Abstract T is of a still more satisfactory and welcome nature; for while, in the period under review, the mortality of railway passengers has diminished 21 per cent., that of railway servants, taking both groups, has, in the same time, decreased no less than 78 per cent. It must hence be evident to every inquirer that great improvement in the management of the railway system of this country has taken place within the last ten years, to whatever cause that improvement may be due. The risk of life and limb has greatly diminished among all classes, whether travellers or employes.

In the preceding paper, an ample illustration was given of the distinction intended to be implied between accidents "beyond control of the companies" and those "under control of the companies;" and that part of the question was sufficiently discussed, so far as passengers are concerned; and it is now proposed to investigate it in relation to employes.

The following abstract furnishes the principal facts for the period 1840-51:—

ABSTRACT U.

Deaths amongst Employes from causes Beyond Control of Companies, also from causes Under Control of Companies, 1840-51.

Causes.	Class of Persons.									
	Engine Drivers.		Stokers.		Guards.		Porters.		Other Servants.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
(a)—Beyond control of the Companies	24	31	56	42	61	27	46	15	438	143
(b)—Under control of the Companies, including Miscellaneous	38	53	42	64	54	57	52	41	147	141
Per-centage of (a)	38·71	36·90	57·14	39·62	53·04	32·14	46·94	26·79	74·87	50·35
Per-centage of (b)	61·29	63·10	42·86	60·38	46·96	67·86	53·06	73·21	24·13	49·65

In Abstract I, page 317, of former paper, the fatal accidents to passengers, assumed to be "under control" of the companies, were found to be 55·3 per cent. of the whole; but in this abstract it will be seen, that, with the exception of the class engine-drivers, the ratio of accidents "under control of the companies" are, as a whole, considerably under that for passengers. In the preceding abstract, the accidents in the miscellaneous or unclassified group are placed among

those "under control of the companies;" but the more correct mode of comparison is clearly, for the reasons assigned in page 318 of former paper, to exclude them; and, therefore, in the next abstract which has been prepared to show whether the accidents, assumed to arise from causes under the companies, be increasing or diminishing, the miscellaneous group is not taken into account:—

ABSTRACT V.

Deaths among Different Classes of Employés, showing those from Causes beyond the Control of the Companies, and those not under such Control.

Causes.	Engine Drivers, Stokers, and Guards.			Porters and Other Servants.		
	1840-43.	1844-47.	1848-51.	1840-43.	1844-47.	1848-51.
Beyond control of Company.....	19	44	78	80	177	227
Under control of Company, excluding Miscellaneous	3	36	42	15	32	77

Mortality Per Cent. of each Class to the Total.						
Beyond control of Company.....	86·37	55·00	65·00	84·21	84·69	74·67
Under control of Company, excluding Miscellaneous	13·63	45·00	35·00	15·79	15·31	25·33

If the results in this be compared with those in the preceding abstract, a very important distinction will be observable, the ratio of accidents assumed as "under control of the companies" being very much less, arising from the group of accidents in the miscellaneous or undefined groups being excluded. But there is one feature appearing in Abstract V. of anything but a satisfactory nature, namely, that the ratio of accidents "under control of the companies," in reference to the total deaths from all causes, have, contrary, to that which was found to prevail in Abstract J in regard to passengers, been increasing. In page 315, however, of the former paper, while describing Table XXI., it was clearly shown that, although such modes of exhibiting the relation of statistical facts have some uses, still serious objections may be brought against them when any exact or strict investigation is attempted. In order, therefore, to avoid such objections, the following table has been prepared on the plan of Abstract K, and which is similar in some respects to Table XXXV., only that the accidents arising from causes "under control of companies" are distinguished from those considered as "beyond the control of companies." The first section of which shows the ratio of deaths from causes "beyond" and "under" control of the companies, in the same manner as that followed in Abstract V., only more in detail; but the second section of the same table furnishes the exact ratio of mortality per annum to the numbers exposed to risk in each class of employés:—

The second section of this table is calculated to throw important light on the question of railway accidents, as they affect the different classes of employés, both as regards the causes "beyond control of the companies" and those assumed to fall "under control of the companies." In describing Abstract T, it was pointed out that, ever since 1844, the accidents from all causes have been diminishing; so also, in the preceding table, will it be found that generally in each class of servants have the fatal accidents been decreasing within the same period, whether viewed in respect to the causes "beyond control of the companies" or otherwise, the chief exception being in the group of "other servants" for accidents from causes "under control of companies." The following abstract, however, of this table will place the question in a clearer light:—

ABSTRACT W.

Ratio of Deaths amongst Employés from causes Beyond and Under Control of the Companies, 1840-51.

	Engine-Drivers, Stokers, and Guards.			Porters and other Servants.			Engine-Drivers, Stokers, Guards, Porters, and other Servants.		
	1840 to 1843.	1844 to 1847.	1848 to 1851.	1840 to 1843.	1844 to 1847.	1848 to 1851.	1840 to 1843.	1844 to 1847.	1848 to 1851.
Number exposed to risk	6,080	10,852	23,154	54,134	96,548	209,000	60,214	107,400	232,454
Beyond control of Companies	19	44	78	80	177	227	99	221	305
Under control of Companies	3	36	42	15	32	77	18	68	119
Ratio of, Beyond control of Com- panies	One in 320	One in 247	One in 301	One in 677	One in 545	One in 921	One in 608	One in 486	One in 762
Ratio of, Under control of Com- panies	2,027	302	558	3,609	3,017	2,714	3,345	1,579	1,953

It is thus obvious that, so far as engine-drivers, stokers, and guards are concerned, there has been a decided decrease in the accidents, both from causes "beyond" and "under" control of the companies, and, consequently, an absolute decrease in the mortality from all causes; but in the case of porters and other servants, it will be found that, while the deaths from causes "beyond the control of companies" have diminished in a very marked manner, those from causes "under control of companies" have increased. In the last section of the preceding abstract, it will, however, be seen that, viewing all the railway employés in the aggregate, there has been a decided decrease in the deaths from both classes of accidents, whether from causes beyond or under control of the companies. In Abstract K, it will be found that, among passengers, although the deaths from all causes had largely decreased since 1844, still those from causes "beyond the control of the companies," in that period, increased, but not in so great a ratio as the deaths from causes "under the control of the companies," had diminished. The decrease from causes "under the control of the companies," it will be observed,

by comparing the results of Abstract R for passengers with those of Abstract W for employés, is very nearly the same within the period 1844-51. From the principle on which Tables XXXI., XXXII., and XXXIII., have been formed, it is questionable whether the number of employés therein deduced as being in the service of the companies prior to the year 1844, can be safely relied on, although subsequent to that period they may be considered as strictly applicable to the purposes to which they have been applied in this contribution; in fact, subsequent to 1847, a census has been taken in the alternate years. Looking, however, at the figures determined for the years 1840-43, it is to be doubted whether the number of employés then in actual service was not much less than stated in the tables just referred to. For other reasons than those appearing from an examination of the figures in Table XXXIII., it may be fairly assumed that, in the early period of railway management, a less number of employés was required in the railway service, *pro-rata* to the extent of the line of railway open to traffic; for it has already been shown, in the early part of this communication, that both the passenger and goods traffic have increased in a much higher ratio than the extent of miles of railway open to traffic, and, consequently, the number of railway employés has also increased in a like high ratio. This is an important consideration to bear in mind while engaged on this part of the inquiry which relates to employés only. The same difficulty did not arise while engaged in the examination of a similar question in respect to passengers, for the number of passengers and the extent of mileage were known for each year of the whole period under observation; but, as already stated, no census of railway employés was available for the purpose of this inquiry until May, 1848. Assuming that the remarks now advanced, in respect to the estimated number of employés given in Table XXXIII., are generally correct, it will follow that the actual rate of mortality among railway employés, for the period 1840-43, was much greater than that shown in the preceding tables and abstracts, and hence, in the present state of the investigation of this question, it would be difficult to positively assert whether, as in the case of passengers, the mortality of employés has not also uniformly diminished ever since 1840, notwithstanding the indications to the contrary contained in Table XXXVI. and Abstract W.

Whatever opinions may be held as to the improvements likely to take place in railway management for the future, for the protection of the lives of passengers and employés, one thing is quite certain, that, in the period within which observations and recorded facts may be safely relied on, great improvements must have been effected in the management of railway affairs; and more credit is due to those intrusted with the conduct of these matters than either the public press or the people of this country for a long time seem disposed to accord to them.

In pages 320-32 of the preceding paper will be found important facts and deductions in relation to "collisions;" and although that portion of the inquiry had special reference to passengers, many of the observations are equally applicable to the case of employés. The following table exhibits the number of deaths taking place from collisions at stations, and from collisions not at stations, during the period 1844-51:—

TABLE XXXVII.

The Number and Ratio of Deaths from Collisions during the Years 1844-52, happening at Stations, and from Collisions not at Stations, among

Period.	Engine Drivers.				
	Number.	Not at Station.		At Station.	
		Killed.	One in	Killed.	One in
1844 to 1847.....	3,658	4	914	2	1,829
1848 „ 1851.....	7,910	2	3,955	1	7,910
1852	2,416	..	..	3	815
1844 to 1852.....	14,014	6	2,336	6	2,336

Period.	Stokers.				
	Number.	Not at Station.		At Station.	
		Killed.	One in	Killed.	One in
1844 to 1847.....	3,800	2	1,900	2	1,900
1848 „ 1851.....	8,205	3	2,735	2	4,102
1852	2,537	2	1,268	1	2,537
1844 to 1852.....	14,542	7	2,077	5	2,908

Period.	Guards.				
	Number.	Not at Station.		At Station.	
		Killed.	One in	Killed.	One in
1844 to 1847.....	3,394	2	1,697	1	3,394
1848 „ 1851.....	7,339	1	7,339	3	2,446
1852	2,269	..	..	..	..
1844 to 1852.....	13,002	3	4,331	4	3,251

Period.	Porters.				
	Number.	Not at Station.		At Station.	
		Killed.	One in	Killed.	One in
1844 to 1847.....	16,037	..	..	2	8,018
1848 „ 1851.....	34,677	..	..	1	34,677
1852	10,722	..	..	1	10,722
1844 to 1852.....	61,436	..	..	4	15,359

Period.	Other Servants.				
	Number.	Not at Station.		At Station.	
		Killed.	One in	Killed.	One in
1844 to 1847.....	80,511	2	40,255	1	80,511
1848 „ 1851.....	174,323	4	43,581	7	24,903
1852	53,897	5	10,779	..	..
1844 to 1852.....	308,731	11	28,066	8	38,591

It will be seen that this class of accidents, which, in the case of passengers, was shown, at page 320, to constitute nearly 59 per cent. of all accidents assumed to be under the control of the companies, does, in regard to employés, amount to little more than 21 per cent. of all the accidents arising from causes under the control of the companies; and this is a distinction which it is of much importance to keep in view, as it is calculated to throw much light on the proximate cause of accidents in railways, and the direction in which improvements are more immediately to be looked for. With this object in view, the following abstract has been prepared, showing of the causes assumed to be under control of the companies, the degree in which each particular class of employés is subject to each kind of accident, as well as the relation between each class of employés, and also all employés in the aggregate, to passengers in this respect:—

ABSTRACT X.

The Number of Deaths amongst Railway Employés, and amongst Passengers, during the Years 1840-52, from accidents Under Control of the Companies.

Cause of Accident.	Class of Employés.						Passengers.
	Engine Drivers.	Stokers.	Guards.	Porters.	Other Servants.	Total of Employés.	
Collision	6	8	3	....	11	28	29
Off line	19	13	6	1	6	45	35
Running into station	1	....	....	....	....	1	5
Collision at station	6	5	4	4	8	27	35
Crushed	3	13	14	41	72	143	5
Total.....	35	39	27	46	97	244	109

Accidents from collisions are, relatively to the whole of the above class of accidents, obviously not so fatal to any one class of railway servants, nor consequently to the whole collectively, as to passengers.

In the former paper a very complete investigation was made of the various circumstances under which collisions took place, distinguishing those collisions at stations from those not at stations, and also those in which the immediate cause was due to the state of the weather, defects in machinery, neglect, and to other circumstances; besides, it was further shown to what extent the various accidents from collisions arose from passenger trains running into other passenger trains, from passenger trains into trains of another sort, from trains other than passenger trains into passenger trains, and from trains, neither of which were passenger trains. And although the data then brought forward had more especial reference to the injuries sustained by passengers, the facts were quite as completely given in regard to employés themselves, and it is therefore now unnecessary to enlarge on the particular questions then discussed. In respect, however, to the preceding abstract of this group of accidents, namely, those assumed to be under control of the companies, the following modification in the way of exhibiting the results will show

the relative frequency of each kind of accident to all causes of the same group of accidents.

ABSTRACT Y.

Ratio of Deaths amongst each Class of Railway Employés and amongst Passengers, during the Years 1840-52, from each kind of Accident Under Control of the Companies, to the Deaths from all causes assumed as being Under Control of the Companies.

Cause of Accident.	Class of Employés.						
	Engine Drivers.	Stokers.	Guards.	Porters.	Other Servants.	Total of Employés.	Passengers.
Collision	17·14	20·52	11·11	....	11·34	11·47	26·60
Off line	54·29	33·33	22·22	2·17	6·18	18·44	32·11
Running into station	2·86	....	....	....	....	0·41	4·59
Collision at station	17·14	12·82	14·82	8·70	8·25	11·07	32·11
Crushed	8·57	33·33	51·85	89·13	74·23	58·61	4·59

The following are the causes amongst those assumed to be under control of the companies, which are most fatal to each class of persons, viz. :—

In the class—			
Engine Drivers	Running off line.....	= 54·2	per cent. of the whole of the above
Stokers	{ Collisions off line, and Crushed are equal }	= 33·3	” ”
Guards	Crushed	= 51·9	” ”
Porters	Do.	= 89·1	” ”
Other Servants	Do.	= 74·2	” ”
Total Employés....	Do.	= 58·6	” ”
Passengers.....	Collisions ...	= 58·7	” ”

Of the accidents under control of the companies, it is remarkable to observe that of the deaths among employés how great a proportion comes under the denomination “crushed,” particularly so amongst porters and other servants. Even in the whole group of employés the ratio from this cause is as high as 58·61 per cent., while amongst passengers it is no more than 4·59 per cent.; and, therefore, by keeping these facts in view there can be no difficulty in understanding the great discrepancy between the ratio of killed and injured among employés and passengers.

Having said this much in regard to the way in which different classes of persons are affected by different kinds of accidents, we shall now return to the subject of Table XXXVII. The following is a condensed abstract of it, and will afford a ready means of judging how far fatal accidents from collisions have decreased in recent years.

ABSTRACT Z.

Ratio of Fatal Accidents from Collisions at different periods amongst Railway Employes.

Period.	Engine Drivers, Stokers, and Guards.					Porters and other Servants.				
	Number Exposed to Risk.	Not at Station.		At Station.		Number Exposed to Risk.	Not at Station.		At Station.	
		Killed	One in	Killed	One in		Killed	One in	Killed	One in
1844-47	10,852	8	1,356	5	2,170	96,548	2	48,274	3	32,183
1848-51	23,454	6	3,909	6	3,909	209,000	4	52,250	8	26,125
1852...	7,252	2	3,626	4	1,813	64,619	5	12,924	1	64,619
1844-52	41,558	16	2,597	15	2,770	370,167	11	33,651	12	30,847

It is hence obvious that so far as the first group of servants are concerned, the danger of fatal accidents from collisions of both kinds has greatly decreased in recent years, but in regard to collisions at stations such has not been the case amongst the other group of railway servants, namely, "porters and other servants."

The next part of this question to which attention is directed is similar to that contained in Abstract M of the preceding paper, which showed the accidents which had happened to passengers from collisions with trains of different kinds. At page 329 it will be found that throughout the whole period of nine years, 1844-52, but one death of a passenger took place from collisions of "express" trains, and also only one from collision of "excursion," while none happened from collision of mail trains, the "ordinary" trains being most fatal to passengers; so also will the same thing be found with regard to employes. The following condensed abstract from Table XXV. gives a general view of the results arrived at.

ABSTRACT Aa.

Ratio of Deaths and Injuries amongst Employes to the Number of Collisions during 1844-52.

Trains.	Collisions.		Employes.		Ratio of Deaths and Injuries to			
	Non-Serious.	Serious.	Killed.	Injured.	All Collisions.		Serious Collisions.	
					Killed.	Injured.	Killed.	Injured.
Express	3	8	2	11	·182	1·000	·250	1·375
Excursion ..	1	7	....	....	....	....	....	....
Mail	8	13	4	8	·190	·381	·308	·615
Ordinary	42	173	22	57	·102	·265	·127	·329
Total	54	201	28	76	·110	·298	·139	·378

Although the "ordinary" trains have had the greatest number of collisions, and have been also the most fatal from this class of acci-

dents, yet when a collision of either an "express" or a "mail" train has taken place, it has proved more fatal to employés than a collision of an "ordinary train;" but on referring to Abstract M the reverse will be found to have been the case in regard to passengers, the collisions of "ordinary" trains being not only more frequent but also more severe and fatal than those of "express," "excursion," and "mail" trains.

In regard to the tendency which accidents from collisions have had, since the year 1844, to occasion a greater or a less ratio of non-fatal injuries amongst employés, it will be seen from the following abstract that in the classes engine drivers and guards there has been a marked and most decided decrease, varying, amongst engine drivers, from 1 in 366 to 1 in 805 per annum, and amongst guards from 1 in 566 to 1 in 1,135 yearly. In the class stokers, however, which appears much more liable to accidents of this kind than the other two classes, it will be observed that during the period 1848-51 the ratio of injuries was less than in either the preceding or subsequent period, but still, while the ratio was as high as 1 in 292 in the first period, it became reduced to 1 in 507 in 1852.

ABSTRACT A3.

The Number and Ratio of Injuries from Collisions during the Years 1844-52, happening at Stations, and from Collisions not at Stations, among

Period.	Engine Drivers.			Stokers.			Guards.		
	Number.	Injured.	One in	Number.	Injured.	One in	Number.	Injured.	One in
1844 to 1847	3,658	10	366	3,800	13	292	3,394	6	566
1848 ,, 1851	7,910	10	791	8,205	8	1,026	7,339	8	917
1852	2,416	3	805	2,537	5	507	2,269	2	1,135
1844 to 1852	14,014	23	609	14,542	26	559	13,002	16	813

The next part of this question which is to be considered is that of the fatal accidents to employés from trains "running off the line." According to Abstracts R and X this cause of accidents has been more fatal to engine drivers, stokers, and guards, than collisions; but it has been otherwise to the other railway servants and to passengers. It will also be observed that of 45 deaths amongst employés from trains running off the line, no less than 38 are recorded as happening to engine drivers, stokers, and guards; and this is only what might be expected, as they are more than any other of the employés exposed to this kind of accidents, while porters and other servants are more liable to death and injury from being crushed, as shown in Abstracts X and Z. The following table shows the deaths and injuries resulting from trains running off the line, since the year 1844:—

TABLE XXXVIII.

The Number and Ratio of Deaths and Injuries from Trains running "Off the Line" during the Years 1844-52, among

Period.	Engine Drivers.			Stokers.			Guards.		
	Number.	Off Line.		Number.	Off Line.		Number.	Off Line.	
		Killed.	One in		Killed.	One in		Killed.	One in
1844 to 1847	3,658	11	333	3,800	4	950	3,394	1	3,394
1848 ,, 1851	7,910	5	1,582	8,205	5	1,641	7,339	2	3,670
1852	2,446	3	815	2,537	4	634	2,269	3	756
1844 to 1852	14,014	19	738	14,542	13	1,119	13,002	6	2,167

Period.	Number.	Injured.	One in	Number.	Injured.	One in	Number.	Injured.	One in
1844 to 1847	3,658	7	523	3,800	8	475	3,394	6	566
1848 ,, 1851	7,910	9	879	8,205	5	1,641	7,339	2	3,670
1852	2,446	5	489	2,537	3	846	2,269	3	756
1844 to 1852	14,014	21	667	14,542	16	909	13,002	11	1,182

One of the most startling results appearing in this inquiry will be found in the preceding table. It will be seen that whether attention be directed to the number of deaths or the number of non-fatal injuries, that in the year 1852 the ratio for each class was amazingly increased beyond that of the period of years immediately preceding, namely, 1848-51. The very wonderful rate of increase in this class of accidents during the year 1852 is difficult to be understood, and it will not be found easy to account for so extraordinary an increase in the deaths and injuries of employes from this class of accidents during the year 1852. On referring to Table XXVIII. it will be seen that the number of trains or parts of trains which actually ran off the rails in that year, was not only relatively to the extent of railway communication open to traffic, but also to the number of persons employed in the service of the companies less than in the preceding period; but likewise the deaths and injuries of passengers from trains running off the line during 1852 were greatly below the averages of the years 1848-51. In 1852 not a single passenger was killed from trains running off the line, and not more than 17 were injured, while in the period preceding 1848-51, the number killed from the same cause was 16, and that injured 96, or 4 per annum killed and 24 injured. It will be found impossible to account for this discrepancy between the deaths and injuries of employes and passengers, on the supposition of an undue proportion of the accidents from trains "running off the line" having happened to goods' and other trains not carrying passengers, for by referring

to Table XXX. it will be seen that not a single case occurred of a goods' train running off the line in the year 1852, and, consequently, no death or injury is recorded from that cause. Of the 14 recorded instances of "running off the line," given in Table XXX. it will be seen that

None occurred to goods' trains.

One only to engines—resulting in no deaths, but injury to one employé, and

Thirteen occurred to } resulting in no death amongst passengers, but injuring 17 of
passenger trains.... } them, while no less than 10 employés were killed and 11 injured.

Results of so curious and anomalous a nature are certainly very striking, and must enlist the sympathies of every inquirer on behalf of the more important classes of the railway employés, who are thus exposed to so frightful a sacrifice of life and limb while engaged in discharge of their duties. It is to be lamented that some more effectual means than are yet in use have not been taken to avert the recurrence of such distressing and calamitous accidents, but I trust the efforts now made to bring this Analysis prominently before the public may not be altogether devoid of some beneficial influence in directing the attention of those in authority to so vitally important a subject.

It is proposed to bring under review, in the next number of this Journal, a condensed summary of railway accidents as they affect passengers and *employés* on the continental railways; and then, as stated in the last paragraph of the preceding portion of this communication, when the whole body of facts is presented, it may be possible to offer some suggestions of practical importance in the prevention of railway accidents.

On a Decimal Coinage for the United Kingdom.

By FREDERIC JAMES MINASI, ESQ.

[Read before the Statistical Society of London, 19th June, 1854.]

AMONG the many improvements which the progress of intelligence and the requirements of commerce are demanding at the present time, there is perhaps hardly one of more importance than that which relates to the coinage of the United Kingdom. The proposal to substitute a decimal system of money of account in lieu of £ s. d., is a change, the magnitude of which does not appear to be fairly estimated by many of its most zealous advocates; and the necessity and advantages to arise from the adoption of which, it must be confessed are as yet unfelt by the great mass of the people, upon whom it would exercise most important effects. A committee of the House of Commons, after an examination of witnesses representing the scientific and mercantile interests of the community, have decided upon recommending that such a change should be made, and have pointed out the advantages that would result to commerce and to the public generally, by the employment of a decimal system of money similar to the systems in use among many of the nations of continental Europe and America; and numerous pamphlets and several public discussions upon this subject have tended to strengthen their recommendation. Notwithstanding, the people of this country in general do not sympathize with the movement, nor participate in the views of those who are eager to see it carried out. This, I think, mainly arises from ignorance of the subject, or perhaps rather from a want of perception of the difficulties, on the one hand, that are attendant upon the present mode of reckoning, and on the other, of the facilities that would exist under a system of money, weights, and measures, arranged on the same principle as our ordinary numeration, in a decimal progression. Another reason may be, that the question of accounts, among the labouring population, is not so important an element in their pecuniary transactions as it is with those who have to deal with extensive mercantile transactions, and calculations involving the coins of account of this and other countries. And if the people generally are insensible to the benefit of a decimal coinage, they seem equally unconscious of the difficulties connected with many of the plans which have been proposed for effecting the change in question, otherwise it is reasonable to believe that we should have had public meetings at which the poor man—the labourer and cottager—would have been able to express his opinion upon a subject so important to himself. It is the existence of these difficulties that has mainly contributed to raise the discussion on the subject at present going on, chiefly by means of the press. So much, indeed, has already been written on decimal coinage, and so many systems proposed for effecting its introduction, that it might seem unnecessary to bring it before this Society, when in all probability, every one of its members has already made himself very fully acquainted with the subject, and arrived at his own conclusion after an examination of witnesses more numerous than those who were questioned by

the Parliamentary Committee, and of every shade of opinion in the matter. I am however so much impressed with the conviction that a too-ready acquiescence in the plan put forth in their report of August last, by the authority above referred to, supported as it is supposed to be by names that rank so high in the scientific and commercial worlds, has led to an unwillingness, or at least to a sort of indifference, in listening to statements of the difficulties which lie in the way of its general adoption, or of other suggestions that have been made for effecting the change, that I desire to re-open the subject for a more thorough and general discussion; and I feel confident that it cannot be brought before a fitter tribunal than the Statistical Society of London. This then must be my apology for offering to your notice a brief enumeration of the various plans already made public for introducing a system of decimal money into this country. I shall venture to make a few observations on each in passing, and leave the subject with you for that careful consideration I have no doubt it will receive.

It is perhaps almost needless to state that after an examination of twenty-seven witnesses, comprising among them Sir John Herschell, Sir John Bowring, Colonel Pasley, Professors Airy and De Morgan, Mr. Hankey, Mr. Rowland Hill, &c., together with several persons extensively engaged in trade, both wholesale and retail, the committee appointed by the House of Commons to consider this subject came to the conclusion that the present system of money employed by us "is shown to entail a vast amount of unnecessary labour and great liability to error, to render accounts needlessly complicated, to confuse questions of foreign exchanges, and to be otherwise inconvenient." That a decimal system of coinage "would lead to greater accuracy, would simplify accounts, would greatly diminish the labour of calculations, and, by facilitating the comparison between the coinage of this country and other countries that have adopted the decimal system, would tend to the convenience of all those who are engaged in exchange operations, of travellers, and others. An important benefit would be derived in several departments of the public service, and in every branch of industry, from the economy of skilled labour that would result from the proposed change, at the same time that the education of the people generally would be much facilitated by the introduction into our schools of a system so directly calculated to render easy the acquirement of arithmetic." On these points all the witnesses may be regarded as unanimous, thus confirming the advisability of establishing a decimal coinage in this country. Upon the exact system to be selected, however, the report informs us that "a difference of opinion was expressed relative to the precise basis which should be adopted for introducing the decimal system, so as to produce the least amount of temporary inconvenience, and the smallest extent of unwillingness to encounter the change, on the part of the classes who are the most likely to be affected by it."

The plan finally adopted by the committee is as follows:—They propose to retain the present sovereign, or pound sterling, intact as the unit of account, and to descend in a decimal progression from this by means of certain new coins of account termed in the report "*florins*," "*cents*," and "*mils*;" the first of these having already

been introduced, some few years since, in anticipation of the contemplated change, and marked "one-tenth of a pound." The *cent* would, in like manner, be the tenth of a florin, or $2\frac{2}{3}d.$ of the present currency, and the *mil* the tenth of a cent, equal to $\frac{2}{5}\frac{4}{5}$ of a farthing.

An advocate, for some years past, of a decimal system of money, weights, and measures, for the United Kingdom, I hailed with much pleasure the publication of the Report of the Committee, containing as it does, a recommendation to carry out the object proposed for its consideration; a closer view, however, of the plan therein set forth, especially in relation to the poorer classes of the people, brought me unwillingly to the conclusion that unless the difficulty which is seen to belong to the conversion of the lower denominations of coins can be removed, it would be better not to attempt the change. The committee object to make any alteration in the pound chiefly on the ground that all our mercantile calculations are made upon this basis, any change in which would most likely create a considerable amount of disturbance in our confined and familiar notions of large sums, such as revenue, income, salaries, contracts, &c., while a similar confusion of ideas would result to the traffickers of other countries in arranging money transactions now calculated on the basis of the pound sterling.

The sovereign then being preserved as the unit of account, it remains to notice the change that would fall upon the coins of less value. There seems to be little difficulty with the *florin*, which is two shillings of the present currency; it has been remarked, however, that in such an expression as, say £2·3 it will not at first be very clear how ·3 means 6s., the old and popular ideas being retained so long as the old coins remain in circulation, but this and similar objections are comparatively trifling: the present shilling and sixpence would exactly be represented in the new system by 50 and 25 *mils* respectively. So far, well; and truly if we had a population who required no coins of a less value than a sixpence, we could not desire any better arrangement, but, unfortunately for this plan, we have a vast labouring population to consider—the million—who are more familiar with the penny than with the pound, and who would be most injuriously affected by the introduction of a new coinage such as this scheme proposes: for the shilling being divided into 50 *mils*,

Pence.		Mils.	Pence.		Mils.
1	would be	$4\frac{1}{5}$	7	would be	$29\frac{1}{5}$
2	"	$8\frac{2}{5}$	8	"	$33\frac{3}{5}$
3	"	$12\frac{3}{5}$	9	"	$37\frac{4}{5}$
4	"	$16\frac{4}{5}$	10	"	$41\frac{1}{5}$
5	"	$20\frac{1}{5}$	11	"	$45\frac{2}{5}$

Thus out of twelve sums, commencing at a penny, only two could be accurately represented under the new coinage, and as there would be nothing less than a mil, every purchaser at the remaining sums would be called upon to pay an additional mil to cover the deficiency: now small as the difference may seem to the wealthy, it will hardly be denied that through the constant multiplication of such instances—and they would be many in the poor man's case—a large per-centage will be taken, and a serious deduction made from the pockets of those least able to bear it.

Expressing the value of the new coins in term of the old, we have

Cent.		Pence.		Cent.		Pence.
1	=	2 $\frac{2}{5}$		6	=	14 $\frac{2}{5}$
2	=	4 $\frac{4}{5}$		7	=	16 $\frac{4}{5}$
3	=	7 $\frac{1}{5}$		8	=	19 $\frac{1}{5}$
4	=	9 $\frac{3}{5}$		9	=	21 $\frac{3}{5}$
5	=	12		10	=	24

so that, as in the preceding illustration, only two coins are capable of representation in the other money; in fact, it requires but little penetration to see that a great amount of error and confusion, to say the very least, would be the result of adopting the plan proposed by the committee in their report. The opinion on this point, of Sir John Herschell, the Master of the Mint, is well worthy of attention, he says, "There is no doubt that the introduction of a new system would meet with great resistance from the lower class; and until there was some indication of a probable diminution of that resistance I think it would not be prudent to force the thing." If this remark applies to the introduction generally of a change in the coinage, how much more forcibly does it tell in the case which would compel the poorer classes to pay a very large per-centage upon all the purchases they make, giving rise to a considerable amount of distrust and discontent among the population of our agricultural and labour districts. Who is not familiar with the history of the introduction of the *new style* into this country in 1752, the amount of ill feeling with which it was received by these classes, and the fierce demand "Give us back our eleven days:" if I mistake not the schoolmaster found it no easy matter to reconcile them to the change. In the case at present before us I conceive the wrong would be more felt, because more real and more apparent. A late writer on this subject observes, "We must recollect that bankers and merchants make but a very small part of the population to whom the question must be addressed; they are so accustomed to figures and accounts, and to the currencies of different countries, that it can make very little difference to them in what coin or denominations they keep their accounts,—they could adapt themselves without difficulty to any change that might be made. To the mass of the population, on the contrary, any great change in the value of the coins of the country, (however useful it might be in accounts,) would produce a most fearful confusion and extreme distrust. We are now constantly told of the cost of war, and reminded in tones of great alarm that we shall, in consequence, have to pay a 5 per cent. income tax; but the advocates of the mathematicians' decimal system of coinage declare that they cannot conceive why we should object to the introduction of their new system of coinage, as the change can only produce either a loss of 4 per cent., or an increase in the price of certain articles of 17 per cent.; this increase of price to be sustained, be it observed, not once only by those who have a certain amount of property, but to be constantly borne by all, even by the poorest members of the community, on whom the change will fall with the greatest weight, as they are the persons who keep the greatest part of their money, and receive the chief of their wages, either in, or calculated by, the copper coinage.*

* Dr. J. E. Gray.—Decimal Coinage, what it ought and what it ought not to be.

Reference has frequently been made to the subject of penny dues, as postage and receipt stamps, tolls, &c., and it has been proposed to meet the difficulty by an Act of Parliament, which should compel the payment of 5 mils in lieu of the penny, for a series of years, so as to produce a fund that would enable a reduction to 4 mils after such a period, a course by no means likely to reconcile the public to the change. There are however some penny items which I think have been much overlooked, and which, perhaps, could hardly be met in this way: take for instance the subject of railway fares; at present provision is made by which the labouring man can travel at the rate of a penny a mile; but if 5 mils is to come in the place of that coin it will entail a serious increase of charge upon a large family in a long journey, and an increased profit, beyond that sanctioned by their acts of parliament, would be thus given to the railway companies, who certainly would not, and could not, be compelled to relinquish their legal rights; whilst this inevitable increase of all the penny fares would be chiefly drawn from the pockets of the working and poorest classes.* In the case of pennyworths by measure or weight, (and not only the poorer classes but the middle ranks also are accustomed to make many purchases in this way,) it will not do to argue that more will be given for the 5 mil-piece than for the penny,—the one would come to be looked upon as the substitute for the other; and even if the difference should be recognized and allowed for in those cases where a larger quantity of the article retailed could conveniently be given to cover the value of the new coin, it would still act to the disadvantage of the buyer, and be a loss to his means by compelling him to purchase more than he might require. Think, for a moment, of the large number of purchases made by the poor at a penny,—the poor man's coin,—and it will at once be plain that there exists a very strong argument against interfering with its value in the way proposed. Another instance presents itself in the rise in the price of articles of daily consumption, as bread, coals, &c.; at present this is commonly estimated in halfpence and pence, the nearest representative coins to which, in the new system, would be 3 and 5 mils respectively. The pay of the day-labourer, of the soldier, and sailor, the calculation of rates and taxes, and all such considerations based upon the penny, would likewise involve complexity and much annoyance to those who are unskilled in figures, and might therefore be brought forward in support of my present position.† I shall, however, take but one more example, and that a case of some importance. We hear much about the burden of taxes upon knowledge, and the representations made in favour of a cheap literature for the working man; how, then, would that system of coinage be received which would compel him to pay 20 per cent. above its present value for any periodical for which he had been accustomed to give a penny? for a penny being equal to $4\frac{1}{2}$ of the proposed mils, he would have to pay $\frac{5}{6}$ of a mil (the difference between the 5 mil-piece and the penny) additional, that is $\frac{1}{5}$ of a penny, or 20 per cent., upon the price at present charged. It was shown in a leading article of the *Times* newspaper some while back, that the profit to the proprietors of that journal arises from a

* See Note A.—Railway Fares.

† See Note B.—Monetary Calculations during the Transition.

very small fraction of a penny upon each copy, which multiplied by the extraordinary number sold, swelled to a large amount: now under the proposed system of the committee, 2 cents would be $4\frac{1}{2}d.$, which is less than its present price by $\frac{1}{2}$ of a penny; it would therefore be needful to charge a higher sum upon each copy, a tax upon the purchasers, perhaps somewhat less than that which would be imposed upon its readers at a penny an hour.

Upon considerations of such a nature as I have attempted to bring forward, then, I maintain that much inconvenience and confusion, and, in many cases, positive injury, would be the result of carrying out the plan determined on by the committee; and I moreover think that such results would not be counterbalanced by the very doubtful advantages expected to accrue to the more intelligent portion of the people by its adoption. It has already been remarked that although there is a very strong feeling in favour of a decimal system of money for this country amongst those who are competent to judge in the matter, there is yet much diversity of opinion as to the mode of effecting the change, and several other plans have been submitted to the attention of the public; to the more prominent of which I shall proceed to refer; and I notice in the first place what has been termed "the *new guinea* system." If our present pound were just tenpence more in value it would contain exactly 1,000 farthings, and the thing is done at once, for we have only to coin pieces of the respective values of 10, and 100 farthings each, and we should have coins of account of £1 0s. 10d. (1,000 farthings), 2s. 1d. (100 farthings), $2\frac{1}{2}d.$ (10 farthings), and 1 farthing, and each could be represented in money of the old currency and entirely free from the difficulty connected with the penny. It will not I think excite much surprise that this system has found but few admirers, when—to pass over the objections stated by the committee, and others equally forcible—it is considered that it involves the very awkward conversion we should be called upon to make in estimating sums, calculated in the new pound, in relation to the old. Had our guineas been retained, and their possessors contented to lose 2d. on each, such a plan might, perhaps, have succeeded; and, according to Professor De Morgan, was actually proposed in 1816, when the new shilling coinage was commenced.

The next proposal I shall notice is that advocated under the title of the *ducat*, or ten shillings' unit; it proposes that the half sovereign shall rank as the chief coin of account, and be subdivided into 10 shillings as at present, thus retaining a valuable and most familiar coin, which Sir John Herschell in his evidence terms the poor man's unit. In the next stage we have to divide the shilling into ten parts to obtain the *cent*, which would give the following values:—

Cents.		Pence.		Cents.		Pence.
1	=	$1\frac{1}{5}$		6	=	$7\frac{1}{5}$
2	=	$2\frac{2}{5}$		7	=	$8\frac{2}{5}$
3	=	$3\frac{3}{5}$		8	=	$9\frac{3}{5}$
4	=	$4\frac{4}{5}$		9	=	$10\frac{4}{5}$
5	=	6		10	=	12

each cent here being one-half of that in the system under the pound unit. Again; each cent would be composed of 10 *mils*, so that

Mils.		Farthings.		Mils.		Farthings.
1	=	$\frac{1}{2}\frac{1}{2}$		6	=	$2\frac{2}{3}\frac{2}{5}$
2	=	$\frac{2}{3}\frac{4}{5}$		7	=	$3\frac{9}{25}$
3	=	$1\frac{1}{3}\frac{1}{5}$		8	=	$3\frac{21}{25}$
4	=	$1\frac{2}{3}\frac{2}{5}$		9	=	$4\frac{8}{25}$
5	=	$2\frac{1}{5}$		10	=	$4\frac{1}{5}$

I think that there can scarcely be any other opinion upon this scheme than that, with the exception of retaining the present shilling, (certainly a point gained,) it offers serious objections even as compared with the proposal of the committee, since, without even retaining the pound, like that, it necessitates the coining of two new pieces of money which could not be represented by the present currency, and which, it is seen, would have to continue in circulation side by side with the new, for a period estimated by Sir John Herschell at twenty years. Yet a late writer advocating this system seems blind to this, its great defect, for he says, "Mark the ease with which cents and mills under this unit accommodate themselves to our present coinage—5 cents make 6*d.*, 2 cents 5 mills make 3*d.*, enabling us to let these coins circulate during the change, and, in fact, only rendering it necessary to withdraw the fourpenny pieces."* The writer does not say how he would accommodate our present 1*d.*, 2*d.*, 4*d.*, 7*d.*, 8*d.*, 10*d.*, or 11*d.*, to the scheme he advocates.

I notice, in the next place, four systems which are mainly disapproved of as establishing a *silver* instead of a gold monetary standard as we have at present, an alteration which is decidedly objected to by the best authorities.† We have, under this division, the *florin*, *shilling*, *dollar*, and *franc*, respectively proposed as the unit of account. In the first two of these the decimal progression demands coins of the values of $2\frac{2}{5}$ *d.* and $\frac{2}{5}\frac{4}{5}$ of a farthing, or of $1\frac{1}{5}$ *d.* and $\frac{1}{5}\frac{2}{5}$ of a farthing,—the same in fact as the cents and mills already referred to under the pound and ducat units; whatever objections, therefore, can be urged against those systems apply with the same force here. With regard to the *dollar*, the proposal is to divide it into 100 cents, as in the United States, and thus to assimilate the coinage of the two most commercial nations of the world. The *cent* being equal to our halfpenny, and the *dollar* to four shillings and twopence of present money, it is clear that the difficulties of the penny would at once vanish, and little or no confusion result to the poorer classes from its adoption,—whilst we have the experience of America in effecting the change; and according to Mr. Brown, the Chairman of the Committee on Decimal Coinage, who was in that country during the period when the alteration was going on, "you were hardly aware of a change taking place." This system has lately been introduced into Canada, and were it not for the objection to which allusion has been made, there would not be such insuperable objections to its adoption in this country. The suggestion to make the *tenpence*, or *franc*, the unit of account, has been put forward by some who wish to see the penny retained; that coin being represented by the first decimal place in such a system, thus, as in the last scheme, getting rid of the chief difficulty in the question: the pound sterling would here be represented by 24 francs. It is to a modification of

* Mr. W. T. Thomson on Decimal Numeration and Decimal Coinage.

† See Note C.—The Monetary Standard.

this plan, (which has been most ably advocated*) and that which precedes it, that I shall, in the last place refer—a scheme for effecting the desired end which has, in opposition to first conclusions, forced itself upon my own mind after a somewhat careful consideration of what appear, under existing things, to be the chief requisites for a decimal system of money for the United Kingdom. These are:

1. That the new system should be one free from any liability to give rise to injustice or confusion among the poor and illiterate classes of the community, thereby creating a prejudice against its use.

2. That it should not necessitate the withdrawal of the most useful and popular coins already in circulation, and with which, from habit, every one is familiar.

3. That it should possess the greatest possible clearness in expressing its coins in the old money, and *vice versâ*.

4. That there should be but few coins of account, and those of a convenient size; and, if possible, of different metals.

5. That it should be an experiment which might be withdrawn without difficulty if found inconvenient in practice.

6. That the unit of account should be a gold coin of moderate value. And,

7. That its lower denominations of account should range in value, as nearly as may be, with the units of currency of such foreign states as we have most important relations with.

The proposal founded upon the foregoing principles, and which I advocated in a pamphlet entitled “A word in behalf of the Poor Man’s Penny,” published in February last, is simply as follows:—For the unit of account I propose to create a new gold coin, to be termed an *Imperial*, or other more appropriate name, the value of which, in our present money, shall be exactly $\frac{5}{12}$ of a pound sterling, that is, 100 pence, and also a new silver coin of the value of 10 pence; these are all that would be required, and we have, with the present penny, at once a complete decimal system, our money of account being thus—

10 pence = 1 *argent* (franc, tenpenny, or other name).

10 *argents* = 1 *imperial*.

It will be obvious at once that in such a plan as this we entirely get rid of the difficulty in relation to the copper coinage to which so much attention has been drawn; and not only so, but we should also adopt all the advantages that belong to the *dollar* and *franc* systems without the objection of establishing in this country a silver monetary standard. Moreover, all the conditions just laid down are admirably fulfilled, for—

1stly. No confusion nor mistrust would arise among the lower

* See a pamphlet entitled “An Examination of the Report and Evidence of the Committee of the House of Commons on Decimal Coinage, with reference to a similar, sounder, and more comprehensive mode of proceeding.” By Theodore Rathbone, Esq. 3rd Edition. In the preface to the 2nd edition, page xv., Mr. Rathbone speaks in terms of high commendation of the plan I here advocate, and as (next to his own, in which the pound is preserved intact, and as the measure of value and legal tender) the one to which he gives a decided preference for “its simplicity, comprehensiveness, and perfectly decimal character.”

classes of the people, since the new coins could be represented in the old, while the penny would remain unaltered in name and value.

2ndly. The old coins might continue in circulation for any length of time that might be found necessary.

3rdly. The two systems are obviously convertible with great simplicity, and *all* the old coins easily represented by the new, and the reverse, thus—

Coins of the Present System.		Value in Proposed System.				
	Value in pence.	Imp.	ar.	p.		Imp.
The penny	1	0	0	1	or	·01
The three-penny piece	3	0	0	3	„	·03
The four-penny piece	4	0	0	4	„	·04
The sixpence	6	0	0	6	„	·06
The shilling	12	0	1	2	„	·12
The florin	24	0	2	4	„	·24
The half-crown	30	0	3	0	„	·30
The crown	60	0	6	0	„	·60
The half-sovereign	120	1	2	0	„	1·20
The sovereign	240	2	4	0	„	2·40

4thly. There would be but three coins of account, whereas the committee names four, (it would, I think, be better to ignore half-pence and farthings in account, as is frequently done at present, but they should still be current for the use of the poorer classes; nevertheless, if found desirable, the farthing might be withdrawn and the penny subdivided into ten *mites*;) so that two places of decimals would represent *argents* and *pence*, or simply *pence* if preferred, and thus the absence of a third column of figures would materially lessen the labour of addition. Also the new coins would be of different metals, and of a convenient and, at the same time, a different size, thus precluding all chance of mistake in their use: the *imperial* would be a little smaller than the present half-sovereign, and the *argent* somewhat less than a shilling piece.

The 5th and 6th requirements are also equally fulfilled: and

Lastly. It will be readily observed that great facilities would be afforded to travellers and others in more easily effecting exchange operations. The *half-imperial* would represent the United States' *dollar*, and the *hard dollar* of Spain and the South American States; the *argent* would equally approximate to the French and Belgian *francs* and other foreign coins of the same value; while the Dutch *guilder* and the *florin* of the Zollverein, &c., would be indicated by *two argents*. For this and other reasons it would doubtless be found convenient to coin such pieces as—

	s.	d.
The <i>half-imperial</i> , or <i>dollar</i> : value in present money	4	2
„ <i>four-argent piece</i>	3	4
„ <i>two-argent piece</i> , or <i>guilder</i>	1	8
„ <i>half-argent</i>	0	5

These could be struck in silver, and would eventually supply the place of those at present in circulation. A *Victoria*, equal to ten *imperials*, or 1,000*d.*, answering to the *double eagle* of the United

States, would likewise be found useful, and might be made a handsome commemorative gold coin, considerably smaller than the present crown piece.

There is one point—I think the only one—that may seem objectionable in this scheme for a decimal coinage, namely, the necessity for the change of the unit of account from the *sovereign* to the *imperial*; it has, however, I trust, been made sufficiently evident to every impartial mind that to retain the pound would be to include in the system an element entailing far greater practical inconvenience than to continue our present money without alteration, and that if a decimal coinage is to be introduced in this country it should be at the expense of the pound. Those who would be affected by such a change are much better able to cope with the difficulty than the labouring classes would be with the far greater and more confusing alteration in their penny.

In the system under consideration the unit of account is five-twelfths of that now in use; hence

Value of *imperial* : value of £ :: 5 : 12 or 1 : 2·4.

That is, any number of *pounds* may be represented in *imperials* by multiplying by *twice* 12 and separating the last figure by a decimal point. Examples—

1. Reduce £143 to *imperials*.

$$143 \times 1\cdot2 \times 2 = 343\cdot2 \text{ imperials.}$$

2. Reduce 15s. 9d. to the new coins.

	Imp.	Imp.	ar.	p.
15s. 9d. = 189d. =	1·89	or 1	8	9

A five-pound note would exactly be *twelve imperials*, and the value of any other note would be *twelve* times the number of *fives* contained in its sum.

Such operations as these would not require any large amount of intelligence to effect, and would cease to be requisite in a few years when the system became generally adopted; and thus the only difficulty, if it be one, would be opposed to the class least likely to be puzzled by it.

An objection may possibly be made to the loss of the familiar term “pounds sterling,” and the introduction of new and strange names; but the argument, if good, applies with equal force to the plan proposed by the committee; indeed, I think “pounds, florins, cents, and mils,” have a much harsher sound than “imperials, argents, and pence,” which terms, by the way, might, at some future period, when the old coinage had disappeared, be exchanged for those now in use.

This, then is the system of decimal coinage for the United Kingdom which I advocate, under a strong conviction that it is the only one that could be attempted under existing circumstances with any probability of success, and without the introduction of incalculable confusion and mischief, to say nothing of the great mechanical difficulty of withdrawing and recoinng the copper and silver now in circulation, (amounting, according to Sir John Herschell, to “not short of seven hundred million pieces,”) as required in the plan put forth under the sanction of the Decimal Coinage Committee.

Nothing of this kind would be necessary under the system now

proposed, and for which, in the various phases* that it has appeared, I rejoice to say a favourable feeling is now increasingly manifested. Thus the leading journal of the day, on a late occasion, remarking upon this subject observed, "There can be little doubt, even from the experience of the past five years, that if the matter is really to depend on any organic change affecting the copper circulation, the discussion raised and the obstacles suggested will be such that no recommendations of mathematicians, however constantly reiterated, or parliamentary reports or articles in the newspapers, will succeed within any moderate space in bringing the Government to assume the trouble and responsibility of such a measure. If the desire in favour of a decimal coinage is as great as those who trust in the rough intelligence of the masses believe it to be, the argument is not unreasonably urged that they will soon voluntarily bring it into operation if simple means are offered them, while if, on the contrary, the change would be intrinsically unpopular, no compulsory measure, especially of a kind to disturb all previous ideas, could be anticipated without embarrassment. Supposing a tenpenny piece to be introduced, it must certainly be the fault of the public alone if all their calculating habits do not soon flow into the decimal direction; and, at all events, few will deny that while the philosophers are discussing more general changes it may be well to let so simple an experiment make its way."†

To this testimony in favour of the system now advocated I shall not hesitate, in conclusion, to add another derived from the Chairman of the Committee on Decimal Coinage, according to whose statement already quoted, the change made in the money of account of the United States was effected so readily that it was hardly noticeable; and why? clearly because it created no confusion among the humbler classes by introducing a copper coinage that interfered with the half-penny with which they were already so familiar. Well, then, that is just what is here proposed. The *double dollar* and the *double cent* for England; and I think I am not wrong in believing that if it were adopted it would afterwards be recorded, "*you were hardly aware of a change taking place*,"—and I think, moreover, that no one will venture to predict the same of the plan selected by the Committee on Decimal Coinage.

NOTE A.—RAILWAY FARES.

It has been objected to the author's views upon this subject, that the particular fares under consideration would continue to be estimated at a penny per mile, and that the total amount at that rate would be converted into mils, a process which would not involve an addition of more than a single farthing on the whole journey. A little consideration, however, will show the weakness of this objection; for it must be borne in mind that, upon the adoption of the system of decimal coinage recommended by the committee, the legislature would have to fix the rate *per mile* to be taken by the railway

* See Note D.—The Penny Systems.

† "Times," April 21st, 1854.—City article.

companies in lieu of the penny fares at present established by law: now, if postage, tolls, and stamps were to be charged at the rate of five mils, there would be no good reason why other penny dues should be fixed lower. Hence it is fair to conclude that the charges by the parliamentary trains would be made at the rate of 5 mils per mile.

The following example, by no means an extreme case, will show the hardship that would result to a family, consisting of two adults and four children, travelling from London to Liverpool by a parliamentary train:—distance, according to Bradshaw's Railway Guide, 201 miles; whence, taking the children at half fares, we have $201d. \times 4 = 804d. = 3l. 7s.$ present charge; and $201 \times 4 \times 5 \text{ mils} = 4,020 \text{ mils}$, or $4.020l.$, the charge under the proposed system $= 4l. 0s. 5d.$, or an addition of $13s. 5d.$; that is, of 20 per cent. upon the present fares.

NOTE B.—MONETARY CALCULATIONS DURING THE TRANSITION.

That great facilities would be afforded in monetary calculations, by the introduction of a decimal system of accounts, cannot admit of a doubt; but, if the system adopted be one involving great confusion of ideas, and much error in results, during the period of its introduction, it is clear that a strong prejudice would be created in the minds of the public against its employment, and the advantages due to decimal arithmetic entirely lost, especially if calculations, made upon the basis of the new system, should require a frequent comparison with the old. Now, it is easy to show that the plan of the Decimal Coinage Committee is of this kind; and a few illustrations will serve to exhibit its defects in relation to this part of the subject. It will be seen that, whilst the present coinage can readily be converted into that under the system advocated in this paper with mathematical accuracy, its value in that proposed by the committee is, in the majority of cases, only an *approximation*; thus, $15s. 8d. (= 188 \text{ pence, } 1.88 \text{ imperials}) = .78333l. \dots ad \text{ inf.}$; that is, a sum between 783 mils and 784 mils, at option; and one of these must be selected as the representative of $15s. 8d.$ in the new system. Now it is to be observed that, in the ordinary operations of arithmetic, these approximative representations would be productive of erroneous conclusions; and so much doubt would attend calculations involving them, as to induce many persons to prefer the employment of the present mode of reckoning, and then convert the result to the new system—a mode of procedure entirely at variance with the idea that, during the *transition period*, the old system would gradually become extinct, and the new scheme received in its room.

Examples might be drawn from nearly every case in commercial arithmetic to illustrate the view here taken of these difficulties; one or two bearing upon the most ordinary operations will, however, be sufficient. In the case of addition, for instance, we should obtain a result more or less affected by the sum of the increments in each particular item, which, in a long column of figures, perhaps many times repeated, would involve an important error, especially if likely to be augmented by some subsequent process of figures. The case

of multiplication stands out still more prominently in this respect; because, when the multiplier is large, a very serious and startling error results from the operation. Take, as an example of this sort, the following:—

Determine the value of 8,765 articles at 11*s.* 3*d.* each. On the present system, this might be calculated by practice, thus—

10 <i>s.</i>	$\frac{1}{2}$	8765
1 <i>s.</i> 3 <i>d.</i>	$\frac{1}{8}$	4382 10 <i>s.</i>
		547 16 <i>s.</i> 3 <i>d.</i>
		4930 <i>l.</i> 6 <i>s.</i> 3 <i>d.</i>

On the new system, as proposed by the committee, we should have 11*s.* 3*d.* = 563 mils; hence—

$$\begin{array}{r}
 8765 \\
 563 \\
 \hline
 26295 \\
 52590 \\
 43825 \\
 \hline
 4934\cdot695 = 4,934*l.* 13*s.* 11*d.*
 \end{array}$$

or an amount of error of not less than 4*l.* 7*s.* 8*d.* in a single operation.

The same questions, worked upon the system advocated, would stand thus—

$$\begin{array}{r}
 11*s.* 3*d.* = 135*d.* = 1\cdot35 imperials: hence \\
 8765 \\
 1\cdot35 \\
 \hline
 43825 \\
 26295 \\
 8765 \\
 \hline
 11832\cdot75 \text{ Imp.} = 4,930\frac{5}{8}*l.* \textit{exactly} = 4,930*l.* 6*s.* 3*d.*
 \end{array}$$

as before.

Another example is furnished from a case, given at length to illustrate his own views, by Mr. Brown,* from the evidence of Col. Pasley. The problem is to find the value of 215 tons, 17 cwt., 3 qrs., 9 lbs., at 9*l.* 11*s.* 6½*d.* per ton, the correct answer to which, 2,067*l.* 7*s.* 8½*d.*, he obtains by a long process involving 216 figures. A contrast is then made between this method and that in which a decimal system of money and weights is employed, by which the solution of the same question is said to be obtained in 73 figures;† the result, however, is 2,067·277*l.* being nearly 2*d.* less than the correct amount. The smallness of the error in this case, however, is due to the process of division; for if the operation be examined before that is performed, it will be seen that there is an error existing to the amount of more than 8*l.*

* Letter to Francis Shand, Esq., 2nd edition, pp. 11, 12.

† There are really 87 figures in the example given, to which, in fairness, should be added 37 more, required in obtaining 4·275*l.* from the operation 9*l.* 11*s.* 6½*d.* ÷ by 2·24, which is omitted in the example; making in all 124 figures. Any school-boy may work out the same question on the present system in 97 figures.

As a further illustration of the effects that may be expected to result from the adoption in this country of any complex system of decimal coinage, such as that put forth by the committee, the recent letter of an experienced merchant deserves attention:—

“Even in the simpler matter of coinage, it is a most difficult thing for the *mind* of man to comprehend a change. Of all men in the world, one would think that a Paris banker, after sixty years’ experience, would have some *mental perception* of what a *centime* is. But I will prove to you that he can only *think* in *sous*. Take any Paris lists of the exchange on London, and you will find that it invariably rises and falls by intervals of *sous* and half-*sous*, as follows:—

25·00		25·07½ = 1½ sou
25·02½ = ½ sou		25·10 = 2 „
25·05 = 1 „		&c. &c.

and you will never find a quotation ending with 1, 3, 4, 6, 7, 8, or 9 centimes.

In Marseilles (though the *système métrique* has been the law for nearly sixty years) commercial transactions, even in wholesale, are still carried on in the *poids de table* and the *livre tournois*, the *result only* being reduced into francs. In Genoa, where the French metrical system was introduced thirty years ago, the old coinage called in, and francs now the only currency in the place; yet still all mercantile transactions, both in wholesale and retail, are carried on with the old Genoese *cantar* and *pound*, and the price in *livres fuori banco*, the results being reduced into francs, in the proportion of five to six in wholesale, and of four to five in retail. But a yet stronger instance of the pertinacity with which the *mind* retains its old *ideas* of value is found in Venice. There, in 1796 or 1798, the French totally extirpated the Venetian *lira piccola*, and substituted the *franc* as the only currency. About 1820, the Austrians introduced the half-florin, or *lira Austriaca*, which is now universally used as the money of commerce. But in retail shops, and small taverns frequented by “*the people*,” the account is still always made in *lire piccole*, which have not been in existence for more than sixty years, and which have to be converted into the actual currency by a most impracticable fraction, very difficult to manage with the pen, but which the natives perform mentally with the greatest facility.

“I have mentioned these instances to show that though it is very easy to make a law on the subject, yet it is very difficult to change men’s ideas of measure and value. A hundred years’ experience would not familiarize the nation to any *great* change in moneys, weights, and measures; and before that time expired, they would again be altered, either by law or by usage.”—*Letter from Mr. Alexander Robertson to Mr. W. T. Thomson. Assurance Magazine*, vol. iv. p. 370.

Without being committed to the views of the writer of the letter, from which the above extract is given (whose proposal is that “accounts should be kept in pounds, shillings, and *cents* of a shilling”), I think the testimony is valuable, as affording a strong argument in favour of the more simple plan of those who advocate

the preservation of the popular copper coinage—the money of the people—the amount in circulation of which, in the year 1844, was estimated by Sir J. Morrison at about 270,000,000 pieces, or 5,000 tons.

NOTE C.—THE MONETARY STANDARD.

Dr. Gray, who is an advocate for a tenpenny or franc unit of account, in his valuable pamphlet already alluded to, thus writes on this subject—“*No change should be made in the present gold standard.*” This rule is chiefly founded on a matter of policy, because otherwise the advocates of a decimal coinage will necessarily complicate the question by introducing disputes as to whether a gold, a gold and silver, or a silver standard is most advisable. Fortunately, this may easily be prevented by making whatever silver coin may be taken as the silver coin of account correspond with a certain fraction or portion of the sovereign.

It is the more necessary to insist upon this rule, because some of the advocates of the mathematical system, and even so exact and cautious a person as Sir John Herschel, seem to think that if a florin were taken as the unit, “it assumes a silver monetary standard, whereas, for good or for evil, for better or for worse, we are married to a gold one;” and it is a general objection put forward against any other than a pound unit, that it would alter the standard of value.”—*page 26, 6th Condition.*

Mr. Rathbone also observes, on the subject of a universal standard of value:—

“This important question, however, the author must here again repeat, is not in any way whatever mixed up with that of the present scheme. So long as gold is the standard of value in this country, the *franc* or *cent-cent* would be a twenty-fourth or twenty-fifth, as determined, of the pound sterling; if silver ever became so, the pound would be twenty-four or twenty-five, as fixed, of these tenpenny coins.”—*Examination of the Report, &c., p. 40.*

NOTE D.—THE PENNY SYSTEMS.

The following are the leading proposals founded upon the principle that the penny should be preserved. Whatever differences may appear in these proposals, it must be borne in mind that they are the *independent* results of persons convinced that the plan put forth in their report by the Committee on Decimal Coinage is a bad one for the purpose desired, and that, in all probability, had they met together for the purpose in committee, they would have agreed upon and put forth a *single* plan for effecting the introduction of a decimal currency into this country which would not require any interference with the penny and other popular coins. The unanimity of individual effort is certainly very striking in regard to the *penny* and the *ten-pence*.

Mr. Rathbone's Plan.—“The course of proceeding would be simply, as the first great step, to make *pounds, francs, and pence*, instead of pounds, shillings, and pence, our monies of account—and to stamp, at first as a rude temporary expedient, on the face, or rather the reverse, of every circulating coin, its decimal value in tens

and hundreds; these figures, be it observed, instantly furnishing to every eye at once both the decimal value and the actual amount of *pence* and *ten-pences*, with their multiples and decimals, every coin in existence represents. Thus in all the great multitude of our ordinary transactions, in all sums whatever up to the pound sterling, the dot dividing, or the column in account separating, the two first items—*pence* and *ten-pences*, tens and hundreds—would present the ordinary figures of account, and, at the same time, the amount decimally stated in the most pure and perfect form of decimals. The figures would, in short, ever be to this extent one and the same. Half a guinea, for instance, would be twelve *francs*, (or *ten-pences*) and six-pence; that is, either a 12*f.* 6*d.* or 12·6 decimal, and the coins would at once speak for themselves—the half-sovereign (12·0), the sixpence (0·6)—every coin being thus defined and indicated. The only new money or item in our accounts, the *tenpence*, or *franc*, would, whenever this coin were issued, be clearly expressed by the stamp thereon, its thus distinctly defined value (1·0); its tenth, our present penny, (0·1)—twenty *francs*, of course, would be (20·0) and the halfpenny, the five-cent piece, or French *sou*, (0·05) &c. The *ultimate* regular series of coins would probably be—for those very poor districts and classes of the population which some of the witnesses represent as suffering injury and injustice from the want of more exact and minute measures of value, *centimes*, or (as I would propose that they should be called in this country) *cents*, in a series of one to five—(0·01) (0·02) (0·03) (0·04) (0·05), our present halfpenny; (0·10) indicating the penny, (0·50) the five-pence or half-franc, (1·0) the *ten-pence*, or *franc*.”—*Examination of the Report*, &c., p. 23.

Dr. J. E. Gray's Plan.—“Its great feature is, that our accounts should hereafter be kept in *pence*, and *ten-pences*, or *albions*.

1. The value of the penny to be retained unaltered, in which case there could be no loss or misunderstanding as to any existing coin.

2. All the coins at present in circulation may remain in circulation, each passing for the number of *pence* they now represent, as 2, 3, 4, and 6 *pence*; the shilling as 12 *pence*, the half-crown as 30 *pence*, the crown as 60 *pence*, in silver; the half-sovereign as 12 *albions*, or 120 *pence*, and the sovereign as 24 *albions*, or 240 *pence*. Though no longer moneys of account, they would be perfectly understood, and would be most useful for all the current purposes of life, and as coins of circulation.

3. Only two new coins will be required, viz., the *ten-pence*, which may be called an *albion*, or *alb*, and its half, or five-pence; hereafter the crown-piece (6 *alb*, or 60 *pence*) may be replaced by a 5-*alb*, or 50-*pence* coin, and we may have gold coins of 10 and 20 *albs*, 100 and 200 *pence*.”—*Decimal Coinage*, p. 26.

Mr. Laurie's Plan.—“The pound to be divided into 24 coins of *tenpence* each, and the latter again into 100 parts, or *cents*.”—*Manual of Foreign Exchanges*, p. 36.

Mr. Tate's Plan.—“4 *farthings* = 1 *penny*; 10 *pence* = 1 *shilling*; 10 *shillings* = 1 *pound*. New names would thus be avoided, to which there is a decided objection in all classes.”—*Times*, Dec. 11th, 1853.

Historical and Statistical View of the Colony of Victoria
By G. M. BELL, Esq.

[Read before the Statistical Society of London, Monday, 19th June, 1854.]

AUSTRALASIA, or Australia, has been characterised as a maritime division of the globe, distinguished from the older terrene divisions of Europe, Asia, Africa, and America, on account of its having no one continent of that particular name, but including, like other divisions of the world, various kingdoms circumscribed by one shore. In this respect it is considered a kind of anomaly in geographical calculation. It comprehends a tract of ocean bounded on the north by the equator, on the east by a line drawn on the 186th degree of east longitude to the 55th degree of south latitude, on the south by the 55th parallel, and on the west by a line drawn from the North West Cape of Hapau, on the east of the islands of Mysol, Timorlant, and Coram, to the 65th degree of east longitude on the 55th parallel, making an irregular four-sided figure, extending upwards of 5,000 miles in average breadth from east to west, and about 3,200 from north to south. Under the general name Australasia are included the islands in the Pacific, distinguished as Polynesia, and also New Holland, New Guinea, New Zealand, and the islands in their neighbourhood. This arrangement has, of late years, been adopted by most writers. Others have preferred the name Australia as being more in accordance with the primitive appellation *Terra Australia*, or Southern Land.

The discovery of the islands of Australasia may be briefly described. Papua, or New Guinea, was discovered by the Portuguese under D. Forge de Meneses, in 1526; New Holland by the Dutch and Spaniards about the year 1542, although the first authentic account of its being visited is dated 1606; Solomon's Islands by the Spaniards under Alonso de Mandana in 1567; the New Hebrides by the Spaniards under De Quiross and De Torres in 1606, afterwards explored by Captain Cook, who gave them their present name, in 1774; New Britain, New Ireland, &c., by the Spaniards under Le Maire and Shouten in 1646; Van Dieman's Land and New Zealand by the Dutch under Abel Jansen Tasman in 1642; St. Paul and Amsterdam by the Dutch under Ylaving in 1696; Kerguelen's Land, or Island of Desolation, by the French under M. de Kerguelen in 1772; and New Caledonia by the British under Captain Cook in 1774.

Although the name Australasia includes the whole of the islands in the Pacific, the popular idea seems to limit itself to the one large island comprising the two great divisions of New South Wales and New Holland, now more especially known as Australia. This is not only the largest, but appears destined to become the most important island in the world. It is little more than sixty-five years since it was taken possession of in the name of the King of Great Britain, and the first colony founded. Captain Dampier, who discovered this island in 1688, and visited it again in 1699, gave a most repulsive picture of the natives. He described them as the most miserable

people in the world, without houses, without clothes; black, tall, thin, straight-bodied, small limbs, great heads, and heavy brows. Their eye-lids were always half closed to keep the flies out of their eyes, which were so troublesome that no fanning would drive them away from their faces. They had great bottle noses, pretty full lips, and wide mouths. The two fore teeth of their upper jaws were wanting in all of them, men and women, old and young; neither had they any beards, but were long-visaged, of a very unpleasant aspect, having no one graceful feature in their faces.

Upon the recommendation of Captain Cook the British Government determined to found a colony of convicts in Australia; and of this colony Arthur Phillips, Esq., was appointed governor. He sailed from Portsmouth in 1787, in the "Sirius" frigate, accompanied by the "Supply" tender, three store ships, and six transports, having on board a detachment of marines and 778 convicts, of which 220 were women. He arrived in Botany Bay in the beginning of 1788, but finding it in many respects ineligible for a colony, on farther exploring the coast, he fixed on Port Jackson, about three leagues and a-half north of Cape Banks, and here the settlement was formed, which he called *Sydney Cove*. Such was the origin of the present important capital of New South Wales, regarding which Lord Sydney, on the departure of these first colonists, exclaimed with something like prophetic truth, "There goes the foundation of a mighty empire!"

The excellence of the climate, the extent and richness of the pasture lands, the natural resources of the country, and the geographical advantages of its position, gradually attracted free settlers from all parts of the United Kingdom, and more especially perhaps from Scotland. These first free settlers followed a pastoral life. Some colonies were founded through the instrumentality of public companies, others by the facilities enjoyed for agricultural and commercial pursuits. The most important of these are Sydney and Port Philip, both of which had their origin as penal settlements. The great increase in the number of free settlers, and the growing importance of the colonies as the seats of industrial enterprise, gradually forced upon the attention of the colonists and the home government the evils arising from the continuance of Australia as a penal settlement, and, in 1852, the British Government announced its determination that the transportation of convicts should cease.

"Plenty of good land and liberty to manage their own affairs in their own way," were considered by Adam Smith to be "the two great causes of the prosperity of all new colonies." Plenty of good land there certainly is in Australia, but whether the colonists have enjoyed all the advantages from this circumstance, and from being permitted to manage their own affairs in their own way, which the great political economist would indicate as associated with them, seems to be a matter of doubt.* Australia is, however, essentially a British colony, and if, in past years, its extremely remote position, being upwards of 14,000 miles distant from the mother country, and to be reached only by sailing vessels occupying from three to four months on the voyage, and its comparative unimportance as only a penal settlement and the abode of squatters, placed it at a disad-

* Victoria, late Australia Felix. By W. Westgarth, p. 275.

vantage with reference to other colonies under the British crown, it must be universally admitted that its great agricultural, commercial, and mineral resources, as well as the regularity and speed with which it can now be reached by steam communication, have elevated it to a position which bids fair to rival the most important of our colonies.

This elevated position has been attained within the space of a very few years. The extraordinarily rapid increase in the number of the inhabitants and the trade of Australia, are, perhaps, the most remarkable features in its history, though its mineral resources alone have justly excited the wonder of the world.

The colony of Victoria especially has exhibited a degree of progressive prosperity unparalleled by any colony in the history of ancient or modern times; and by confining this paper to a statistical detail of the origin, progress, present position and future prospects of Victoria, a fair idea may probably be presented not only of the general importance but of the immense resources of our antipodean possessions.

Previously to 1851, Victoria, more familiarly known as Port Philip, formed the southern division of New South Wales. On being established as a separate colony it was honoured, by special consent, with the name of Her Most Gracious Majesty. It is favourably distinguished as comprising the greatest comparative extent of available land of any of the other large sections of Australia, and is superior alike for the richness of its soil and the beauty of its landscape. A greater proportion of the finer soil is represented to be of volcanic origin. Extinct volcanos everywhere abound, the craters, in many instances, being clearly defined.

The rich and extensive pasture lands of Victoria early attracted the attention of the inhabitants of New South Wales and Van Dieman's Land, and were eagerly occupied and rapidly supplied with an abundance of live stock; so much so, indeed, that what was an import trade in live stock in 1835 became an export trade in 1838. The fat stock of Port Philip has ever since maintained a pre-eminence in the markets of the adjoining colonies.

The highly interesting account published by Sir Thomas Mitchell of his explorations, undertaken in 1836, of the district of Port Philip, upon which he bestowed the name of Australia Felix, soon attracted a steady tide of immigration from all quarters, but especially from Great Britain, which has rapidly increased since the discovery of its mineral treasures.

The sale, re-sale, dividing and sub-dividing of allotments of land formed a prolific source of profit and loss, of gratification and vexation to immense numbers of the original settlers, as they do now in a more modified form to those of the present day. The Crown grants, in many instances, are made after lands have been sold and re-sold, and withheld where the best interests of the colony might be served by the land being freely offered for open competition. Where the quantity of land is comparatively inexhaustible, and the rapidly increasing colonists are willing and eager purchasers, it would appear to be the policy and interest of the Government, in colonial phrase, to "unlock the lands," in other words, to throw them open to public competition.

The effect of the gold discoveries in Victoria has been strikingly manifested in the general prosperity of the colony, the increase of its population, the augmentation of its live stock, the export of its produce, the rapid advance of its commerce, but especially in respect to the value of the land. An allotment, whose value in 1837 was 50*l.*, rose in 1851 to 4,000*l.*, and in 1853 readily realised 15,000*l.* In various parts of the suburbs of Melbourne the advance in the value of land has been in still greater proportion to this. The following return shows the quantity of crown land sold in 1852:—

Land Sales.

Return showing the Quantity of Crown Land Sold in the Colony of Victoria, the Number of Purchasers, and the Amount Received for the same, during the Year 1852.

Quantity of Land Sold.			Number of Purchasers.	Amount of Purchase-Money Received.		
Acres	Rds.	Per.		£	s.	d.
258,144	1	7	3,134	701,172	7	4

The increase of the population of this colony has more than corresponded with its rapid improvement in other respects. In 1841 the population was little more than 11,000; in 1851, at the period of its separation from Sydney, it had reached 80,000. Melbourne, the capital of the colony, was, in 1841, a small straggling town, with almost impassable streets, and a population of 4,500. In 1843 it possessed a municipal corporation, whose best endeavours were directed to its internal improvement. In 1851 the population had reached 25,000, the principal streets were in the highest state of repair, with broad macadamised carriage ways, open side drains, and kerbed footpaths. Elegant and substantial churches and public edifices met the eye in every direction, while many of the numerous shops might bear comparison with the best in some of our provincial towns. Since the discovery of the gold fields the population of Melbourne and its suburbs has increased, in less than two years, to upwards of 80,000. On the 31st December, 1852, the total population of the colony of Victoria was 148,627, of which 98,313 were males, and 50,314 females. This was exclusive of the aborigines, who were estimated at about 2,500. Such are the figures given in the official returns printed by order of the Council; but according to Mr. Westgarth “the population of the colony had been more than doubled within the interval of one year, namely from 95,000, the estimated number at the end of 1851, to 200,000 at the end of the following year.

Previous to the discovery of gold the staple commodity of the colony of Victoria was wool. The first exportation of wool took place in 1836, but there exists no official report of the quantity then exported. The quantity exported amounted in

1837	to	175,000 lbs. weight, valued at £14,000
1844	„	4,326,000 lbs.
1848	„	10,525,600 „
1852	„	20,047,453 „ valued at £1,062,787.

The importance of the trade in Australian wool may be judged of from the fact that the wool from this colony forms upwards of one-half of the whole wool now imported into Great Britain.

In reference to its wool and the agricultural pursuits of the colony, the following return of the number of live stock on the 31st December, 1852, is not without interest :—

Return of the Number of Live Stock within the Colony of Victoria on the 31st December, 1852.

Horses.	Horned Cattle.	Pigs.	Sheep.	Total.
34,021	431,380	8,996	6,551,506	7,025,903

Another staple article of export from Australia, and which attracts unusual interest at the present moment, is tallow. The extremely low price to which stock had fallen in 1843 led to the practice, partaking almost of the merit of a valuable commercial discovery, of boiling down the carcass for the sake of its tallow. The practice originated in New South Wales. In the Sydney district cases had occurred of sheep having been sold at 1s. a-head, and even as low as 7d. In such a state of affairs it is not surprising that it should have become a grave question whether stock and stations were worth possessing, or whether these could be managed without positive loss. In the Port Philip district sheep had been sold in 1843 as low as 2s. 6d. per head with the right of station; but the discovery of the tallow manufacture elevated at once the value of the sheep and the hopes and profits of the agriculturist. The export of tallow is an important branch of Port Philip trade. The quantity exported

In 1844 was	429 tons	In 1851 was	4,223 tons
1848 „	1,345 „	1852 „	1,995 „
1850 „	4,489 „		

It will be observed that in the two last years, and especially in 1852, there was a considerable falling off in the export of tallow. This is to be attributed to the discovery of the gold fields and the immense increase of population, which naturally created a greater demand for every description of animal food. This demand will, in all probability, continue to increase, and it may, therefore, fairly be expected that the manufacture and export of tallow will gradually diminish. The curing of colonial beef may, for the same reason, be said to have received a temporary check. The following is a return of the number of boiling-down establishments, the number of live stock slaughtered, and the quantity of tallow and lard produced from the same in the colony of Victoria during the year 1852 :

Tallow and Lard.

Number of Boiling-Down Establishments.	Number of Sheep Slaughtered.	Number of Horned Cattle Slaughtered.	Tallow Produced.	Number of Hogs Slaughtered.	Lard Produced.
1	8,000	600	cwt. qrs. lbs. 2,000 0 0	....	....

The depasturing of stock formed the first, and would, but for the discovery of its great mineral wealth, have in all probability, for a long series of years, continued to be the principal occupation and most profitable employment of the Port Philip colonists. The life of a squatter in a country where the climate was so salubrious, the scenery so varied and beautiful, and existence so entirely free from the harass and annoyances incident to older and more populous countries, naturally presented great attractions to numbers of the young, and even of the educated, adult members of home society. The importance of prosecuting other agricultural pursuits besides the mere depasturing of flocks gradually forced itself upon the attention of settlers; and some idea of the present agricultural condition of the colony may be gathered from the following returns:—

Agriculture.

Return of the Number of Acres of Land in Cultivation, with the Produce thereof, in the Colony of Victoria, in the Year ending 31st March, 1853.

Crops.							
Wheat.	Maize.	Barley.	Oats.	Potatoes.	Sown Grasses.	Green Food for Cattle.	Total Number of Acres in Crop.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
16,823	1	411½	2,947½	1,978½	14,101½	401¾	36,663¾

Produce.						
Wheat.	Maize.	Barley.	Oats.	Potatoes.	Hay.	Green Food for Cattle.
Bushels.	Bushels.	Bushels.	Bushels.	Tons.	Tons.	Acres.
498,704½	61	9,431	96,980	4,512½	21,286¾	401¾

Vineyards.

Return of the Number of Acres of Land Planted with the Grapevine, with the Produce thereof, in the Colony of Victoria, in the Year ending the 31st March, 1853.

Number of Acres.	Produce.	
	Wine.	Brandy.
	Gallons.	Gallons.
107¾	4,500	500

In a colony where so small a quantity of produce was raised compared with the number of inhabitants, it was hardly to be expected that there would be any superfluity for export. The following return of the total quantity of grain exported from the colony of Victoria for the year 1852 will, therefore, not be without interest:—

Export of Grain, &c.

Return of the Quantity and Value of Grain, &c., Exported from the Colony of Victoria during the Year 1852.

Wheat.	Maize.	Barley, Oats, and Peas.	Flour and Bread.	Rice.	Potatoes.	Malt.	Total Value.
Bushels.	Bushels.	Bushels.	Tons.	Pounds.	Tons.	Bushels.	£
25,249	627	....	31,696	34	....	12,304

Nor is it at all a subject of wonder that the imports of grain for the same year should be valued at upwards of half a million, as shown in the following table:—

Import of Grain, &c.

Wheat.	Maize.	Barley, Oats, and Peas.	Flour and Bread.	Rice.	Potatoes.	Malt.	Total Value.
Bushels.	Bushels.	Bushels.	Tons.	Pounds.	Tons.	Bushels.	£
87,570	81,182	254,803	23,101	969,920	3,475	2,621	564,881

Of butter and cheese the total value exported in 1852 was 564*l.*, while the total value imported was 66,870*l.* The imports and exports of live stock were nearly of equal value, while the exports of hides and leather amounted to 10,442*l.*, and the imports to 109,958*l.* The value of the exports of bark and timber was little more in 1852 than 100*l.*, while the imports of timber alone amounted to 134,749*l.* The value of the exports of salt-meat was 9,338*l.*, while the value of the imports of salt and preserved provisions was 52,280*l.* Of oil, the quantity exported was little more than 2,300 gallons.

The mineral produce and resources of Victoria constitute, perhaps, its greatest claim to the attention of all classes of society, and have obtained for it a world-wide renown.

The discovery of gold in Victoria may be dated from the early part of 1851, and may be said to have owed its origin to the observation of Mr. Hargreaves, a colonist of New South Wales, that the aspect of the vicinity of Bathurst resembled that of the gold regions of California from which he had recently returned. The quantity of gold exported from Victoria from August, 1851, to the 1st April, 1852, amounted to 563,471 ounces, of which were exported

To London	429,955
Hamburg	3,411
Sydney	122,584
Hobart Town	1,483
Adelaide	6,038

563,471

It has been stated by Mr. Westgarth, late Chairman of the Chamber of Commerce at Melbourne, in his interesting work on the colony, that no material quantities of gold were discovered in Victoria until towards the end of September, 1851, and that a careful calculation had enabled him to estimate the quantity produced, up to the

end of 1852, at 4,891,000 ounces. From the following official return it will be seen that of this quantity a comparatively small proportion had been exported up to the end of that year :—

Export of Gold.

Return of the Quantity and Value of Gold Exported from the Colony of Victoria during the Year 1852.

Description.	Quantity.			Value in Pounds Sterling.
	Ounces	dwt.	gr.	£
Native Gold.....	1,988,526	10	13	6,135,728

Although the produce of gold in 1852 was justly considered very large, there appears no reason for desponding over that of 1853, or of hastily concluding that the yield of gold is rapidly falling off. During the early part of 1852 the limited number of diggers at work procured gold by the pound weight, but now, from their increased numbers, the produce is spread over a larger community, and three ounces are generally the extent of individual labour. During the first six months of 1852 the average weekly quantity was 17,000 ounces, while in the last six months it was 68,000 ounces. In 1853 it was 36,000 against 44,000.

The total produce of the gold fields of Victoria for the year 1853, as given in the circular of Mr. Edward Khull, bullion broker at Melbourne, was 3,090,342 ounces, or 120 tons 15 cwt. 1 qr. 3 lbs. 8 ounces, which, valued at 75s. per ounce, would give 11,588,782*l*. The result of 1853 is thus below that of 1852 by 48 tons; at the same time it shows a produce in round numbers of about one million sterling per month; and where this amount of wealth, contained in one mineral alone, can be extracted from the bowels of the earth in a limited district, at a comparatively trifling expense, the most encouraging hopes may be entertained of the commerce and resources of the settlement.

The far greater proportion of the gold obtained in the colony of Victoria has been exported to the mother country. The following table, drawn up by Mr. Khull, shows the quantity and value, and the places to which gold was exported in 1853 :—

	Ounces.	Value.
		£
To London	1,718,318	6,443,692
„ Liverpool	453,258	1,699,717
„ Southampton ..	202,042	757,657
„ Glasgow	450	1,687
„ Sydney	25,033	93,873
„ Calcutta	3,892	14,595
„ Singapore	44,758	167,842
„ Ceylon	32,710	121,662
„ New York	10,500	39,375
„ Callao.....	6,700	25,120
„ Havre.....	61	228
	2,497,722	9,365,448

It is well known that the banks in Australia, both local and Anglo-Australian, have been the chief mediums through which gold has been remitted to Europe, and it is, therefore, interesting to know the nature and amount of advances made by the banks against shipments of gold. This is shown in the following table also drawn up by Mr. Khull.

In this table is given (I) the price paid to diggers, which is the same as quoted in the Melbourne daily papers. To these quoted prices the broker's commission for purchasing has to be added, which will explain the difference between the invoice and the published price. In the second column the amount advanced by the banks on hypothecated gold is given, which shows an increase in the rate during the year. In column three the rate of discount appears as that charged for advances during the year, which have fallen from 10 per cent. to par, and the digger has, in consequence, benefitted in a corresponding degree by the advance in the price of gold. The freight has remained at $4\frac{1}{2}d.$ an ounce, but $3d.$ has in some cases been agreed upon when parties were shipping to a large extent. The insurance has risen from $1\frac{3}{4}$ to $2\frac{1}{2}$ per cent., which had, for a time, a depressing effect to the extent of $\frac{3}{4}$ per cent. The rumours of war lowered it to $75s.$, insurance having risen to 5 per cent extra. The war premium has not been accepted, the shipper feeling secure as to the contingency.

Prices of Gold; Advance made by the Banks, and Rate of Discount Charged on that Advance; Freight to Great Britain, and Rate of Insurance.

For the Month ending	Price per Ounce.				Advance.	Discount per Cent.	Freight.	Insurance.
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>s.</i>	<i>d.</i>	
Jan. 29.....	70	3—72	9		40—55	$8\frac{1}{2}$ — $7\frac{1}{2}$	$4\frac{1}{2}$ per oz.	$1\frac{3}{4}$ per cent.
Feb. 26.....	73	0—76	6		50—55	5 — $1\frac{1}{2}$	....	....
Mar. 26.....	76	0—77	0		50—60	$1\frac{1}{2}$ —1	....	....
April 30.....	77	0—74	6		....	1	....	2 per cent.
May 28.....	75	6—76	9		....	1—Par.	....	$2\frac{1}{2}$ „
June 25.....	76	6—77	0		....	Par.	....	....
July 30.....	77	0—77	6		....	....	....	....
Aug. 27.....	77	6			....	....	....	....
Sept. 24.....	77	6—76	6		....	....	....	....
Oct. 29.....	76	6—76	3		....	Par.—1 Dis.	....	....
Nov. 26.....	76	6—77	0		....	1 Dis.	....	....
Dec. 31.....	77	3—75	0		....	....	....	....

Among the various institutions that have profited largely from the discovery of the gold fields and the general prosperity of trade in the colony, the banks stand forth the most prominent. The rapid increase of wealth by the older banks, after the discovery of the gold fields, and the impetus thereby given to commercial enterprise, suggested the formation of several new banks, both local and Anglo-Australian, all of which, but especially those formed immediately after the discovery of the gold fields, have been more or less eminently successful.

The following table shows that the position of these banks in the aggregate is most satisfactory:—

Abstract of the Quarterly Averages of the Banks in the Colony of Victoria, from the date of separation (June, 1851,) to 31st December, 1853, with the Number of Depositors at the end of each Year.

Quarter ending	Liabilities.					Assets.				
	Notes in Circulation.	Bills in Circulation.	Deposits and Balances.	Total Liabilities.	Number of Depositors.	Specie.	Bullion.	Debts due to the Banks.	Government Securities.	Total Assets.
Sept. 30, 1851	98,932	8,899	644,484	752,315		219,990	....	924,284	....	1,144,274
Dec. 31, "	180,058	10,497	823,709	1,014,264	6,000	321,825	....	773,601	....	1,095,426
March 31, 1852	447,824	20,717	1,420,660	1,889,201		471,905	2,267	881,400	....	1,355,572
June 30, "	660,980	35,018	2,002,873	2,698,871		597,763	137,226	898,437	....	1,633,426
Sept. 30, "	1,021,293	66,523	3,243,096	4,330,912		1,032,406	500,191	1,887,155	15,385	3,435,137
Dec. 31, "	1,440,092	85,228	4,880,940	5,406,260	20,000	2,014,663	1,229,987	2,486,628	50,000	5,781,278
March 31, 1853	1,433,303	83,389	5,463,482	6,980,174		2,398,055	1,237,003	2,037,524	50,000	5,722,582
June 30, "	1,495,882	111,212	5,953,289	7,560,383		3,157,573	1,591,152	1,927,040	50,000	6,725,765
Sept. 30, "	1,735,652	90,802	5,748,926	7,575,380		3,594,578	1,391,264	3,107,586	50,000	8,143,428
Dec. 31, "	1,919,085	83,940	6,316,810	8,319,835	30,000	3,478,103	856,985	4,262,232	50,000	8,647,320

EDWARD KHULL,
BULLION BROKER.

MELBOURNE, January, 1854.

With a population of 300,000, there are 30,000 depositors, possessing among them upwards of eight millions sterling. The contrast is very striking between the amount of capital employed in the colony at the end of 1851 and the then number of depositors, with that of the year ending 1853, when capital was more extensively diffused.

With the wonderful productiveness of the gold fields, and the great accumulation of treasure and available capital by the banks, it now becomes interesting to know what are the peculiar features of local or commercial improvement exhibited by the colony. These may be gleaned from the tables of the statistics of the colony for the year 1852, compiled and printed under the sanction and authority of the Governor, and submitted to the Council in November, 1853.

We have already given the particulars respecting the population. The following tables show the extent of immigration to the colony of Victoria from the 1st January to 31st December, 1852. They relate to two different classes of emigrants; 1st. Those who were assisted and arrived at the public expense; and 2nd. Those who arrived at their own expense:—

1.—*Assisted Emigrants.*

From what country Immigrating.	Males.	Females.	Total.
England	2,772	2,577	5,349
Scotland	3,590	3,537	7,127
Ireland.....	1,400	1,601	3,001
Total	7,762	7,715	15,477

2.—*Unassisted Emigrants.*

From what country Immigrating.	Males.	Females.	Total.
England	17,348	5,462	22,810
Scotland	3,585	1,102	4,687
Ireland.....	1,063	413	1,476
Other countries	1,731	230	1,961
Australian colonies	43,383	4,870	48,253
Total	67,110	12,077	79,187

It will be observed from these returns that the number of unassisted immigrants in 1852 was five times the number of the assisted; that the largest proportion of the assisted were from Scotland, and the smallest proportion from Ireland. Of the unassisted immigrants, on the other hand, by far the largest proportion was from the neighbouring Australian colonies. Of those from Europe there were from

England	22,810
Scotland	4,687
Ireland	1,476

The following statement of the total value of the imports into, and exports from, Victoria in 1852, as compared with the previous year, affords a very favourable indication of the rapidly advancing trade of that rising colony.

Imports.

Total imports for the year 1852	£4,069,742
Total imports for the year 1851	1,056,437
Total increase	3,013,305

Exports.

Total exports for the year 1852	£7,451,549
Total exports for the year 1851	1,422,909
Total increase	6,028,640

Of this large amount of exports, however, it is right to observe that nearly six-sevenths, or 6,135,728*l.*, was composed of gold, of which nearly the whole was exported to Great Britain and her colonies.

For the conveyance of this comparatively large amount of traffic a considerable number of vessels were necessarily required; and we accordingly have the following returns relating to the shipping inwards and outwards, and to the vessels built and registered:—

Shipping Inwards.

Return of the Number and Tonnage of Vessels Entered Inwards in the Colony of Victoria during the Year 1852.

From Great Britain.		From British Colonies.		From United States.		From Foreign States.		Total.	
Number.	Tons.	Number.	Tons.	Number.	Tons.	Number.	Tons.	Number.	Tons.
251	168,919	1,364	225,446	13	5,820	29	8,031	1,657	408,216

Shipping Outwards.

To Great Britain.		To British Colonies.		To South Sea Islands.		To Foreign States.		Total.	
Number.	Tons.	Number.	Tons.	Number.	Tons.	Number.	Tons.	Number.	Tons.
68	36,936	1,365	286,163	1	222	41	26,975	1,475	350,296

The following is the total numbers of vessels built and registered in 1852:—

	Number.	Tons.
Built	3	203
Registered	62	5,988

Of manufactories and public works, the colony, being in its infancy, can as yet boast of only 57. These comprise no less than 13 breweries and 20 coach manufactories, while there are tanneries 9, engineers' establishments 4, foundries 2, ship-building establishments 2, and boiling-down establishments 5; but of the latter, owing to the increased consumption of butcher meat, only one was at work in 1852. Of stone quarries there were, in the above year, 22, of which 14 were limestone, 6 granite, and the other 2 freestone and sandstone.

It may now be of interest to inquire into the educational institutions of the colony, and the facilities afforded for secular and religious instruction. It is satisfactory to know that these have not been overlooked, but seem to have kept pace with the progress of the country. In the total number of 115 schools provision is made, with the assistance of the Government, for the education of children of all denominations. The following is a summary of the different schools, the number of scholars, the aid received from Government, and the amount of school fees:—

Description.	Number of Schools.	Number of Scholars.	Aid from Government.			Amount Paid from School Fees.			Total.		
			£	s.	d.	£	s.	d.	£	s.	d.
Denominational .	89	6,836	7,148	17	4	5,403	3	2	12,552	0	6
National	9	533	614	6	6	328	13	6	943	0	0
Private.....	17	472	.....			.....			.....
Total	115	7,841	7,763	3	10	5,731	16	8	13,495	0	6

The "denominational" classes include Church of England, Roman Catholic, Presbyterian, Wesleyan, Independent, and Free Presbyterian. Of these the two largest are the Church of England and the Roman Catholic; the former having 36 schools with 3,083 scholars, and the latter 27 schools with 1,825 scholars. The other denominations rank as follows:—

	Schools.	Scholars.
Presbyterian	8	421
Wesleyan.....	7	895
Independent	5	297
Free Presbyterian	6	315

These "denominational" schools are under the supervision of a "Denominational School Board." The "national" schools are divided into two classes, those "within" the settled districts, and those "beyond" the settled districts. The number of schools in the former case

is 4, and in the latter, 5. Of private schools there are 17, with 472 scholars, but the returns relating to them are very deficient.

The number of churches and chapels in the colony in 1852 was 49, estimated to contain about 16,060 persons, while the number generally attending has been stated at 14,520. The following is the return as published by the Registrar-General, from which it will be observed that the largest number of churches are those of the Wesleyans, next to whom come the Church of England:—

Churches, Chapels, &c.

Return of the Churches, Chapels, &c., in the Colony of Victoria on the 31st December, 1852.

Denomination.	Number of Churches.	Number of Persons they are estimated to contain.	Number generally Attending.
Church of England.....	13	3,190	2,930
Presbyterian Church	7	1,800	1,305
Wesleyan Church	17	5,000	5,000
Independent Church	3	1,110	1,010
Baptists	2	480	330
Roman Catholics.....	6	4,400	3,845
Jews' Synagogue.....	1	80	100
Total	49	16,060	14,520

Notwithstanding, however, the extended means of moral and religious instruction possessed by its inhabitants, the amount of crime in a community composed of such a variety of characters from all countries must naturally be expected to be considerable. From a return of the Prothonotary for the colony of Victoria, the total number of convictions in 1852 was 471, of which 147 were for offences against the person, 207 offences against property, and 14 miscellaneous offences. The number of executions in the same year were 2 for the crime of murder. But although crime may be expected to abound in a newly organised, or, perhaps more correctly speaking, unorganised society like that of Victoria, still we are entitled to hope the best for a colony possessing such unparalleled sources of wealth, as that its revenue should be more than trebled in the course of twelve months.

The total amount of revenue received into the colonial treasury for the year ending 30th June, 1853, was 2,451,236*l.* 6*s.* 9*d.*, while the amount for the year ending 30th June, 1852, was only 714,679*l.* 15*s.* 5*d.*, showing an increase upon the year of no less than 1,736,556*l.*

Governor Latrobe, in his despatch to the Duke of Newcastle, No. 104, in allusion to the increase of the revenue for the quarter ended 30th June, 1853, over that of the corresponding quarter of 1852, states that "the gross annual revenues of Victoria, calculated at this rate, would not fall far short of three millions and a-half sterling."

As an excellent illustration of the comparative general prosperity of the colony from 1850 to 1852, the following table is selected from Mr. Westgarth's recent work on Victoria:—

Colony of Victoria. Comparative Summary 1850-1852.

	1850.	1851.	1852.
Revenue, ordinary	124,469	180,004*	845,834†
Revenue, crown	136,852	199,820	730,967
Total revenue	261,321	379,824	1,576,801
Imports	744,925	1,056,437	4,043,896
Exports	1,041,796	1,423,909	7,451,549
Shipping inwards {			
Number....	555	669	1,657
Tonnage....	108,030	126,411	408,216
Bank deposits—4th quarter....	....‡	822,254	4,334,241§
Circulation— ditto ....	....	180,058	1,327,311
Coin and gold ditto ....	....	310,724	3,034,538||
Number of banks	2	3	5
Valuation of Melbourne {			
(annual value)	154,063	174,723	638,000
Population 31st December....	75,000	95,000	200,000

* Includes 24,404*l.* of gold revenue.

† Includes 438,845*l.* of gold revenue.

‡ There are no bank returns for Victoria as distinct from New South Wales, prior to 1st July, 1851.

§ Of this amount nearly 700,000*l.* is deposited by the Government. The banks give no interest on any deposits.

|| Of this amount 1,129,420*l.* consists of gold-dust, estimated either at cost or valuation.

The beneficial effects of the increasing commerce of Victoria on the prosperity of the neighbouring colonies, is shown by the large amount of shipping daily entering the port. A remarkable instance of the extent of that benefit is given in the return of the export trade from Newcastle, New South Wales, for 1853. In 1852, the value of the exports from Newcastle to all the Australian colonies was 25,980*l.* In 1853, the exports to the colony of Victoria alone amounted to 66,039*l.*!

The active pursuit of wealth in the gold-fields, and in the busy marts of commerce, have hitherto tended to induce a neglect of public works and permanently useful undertakings in the colony. More attention is now beginning to be devoted to these objects. On the 7th of March last, a line of telegraphic communication was established from Williamstown, the port of Melbourne, nine miles distant from the city, to the custom-house and other government offices. By this means, the arrival of vessels, as soon as signalled in the bay, is instantaneously made known to the authorities and merchants in Melbourne. A similar line of telegraph will be forthwith extended to the rising town of Geelong, situated to the westward of Melbourne, and possessing a harbour much superior.

Until recently, merchants and emigrants experienced considerable loss and inconvenience from the want of warehouses for their goods—the scarcity and high rates of storage being among the greatest difficulties and disadvantages of the port. This is now remedied, to a great extent, by the erection of a vast number of large and most substantial warehouses by merchants representing all the chief commercial cities of Europe and America. The distance of Melbourne from its port, the expense of lighterage, the delay in

the delivery of goods, and the injury often sustained in their transit, are serious evils that remain to be removed. Several schemes have been proposed for remedying these grievances and facilitating communication between Melbourne and Hobson's Bay. Perhaps one of the best of these is the proposal to have a ship canal or dock to discharge cargo on a wharf close to the city. In the mean time there are two railways in progress; one from Williamstown, the other from Sandridge. The latter will be in operation in the course of a few months.

The city of Melbourne is extending rapidly in every direction. Townships spring up in localities where a short time ago there was not a single dwelling. Little more than twelve months since, North Melbourne was merely the site of a few scattered tents. Now it contains a population of several thousands, with comfortable residences, shops, hotels, and schools. The mere searching for gold is becoming less an all-engrossing passion; and in the suburbs of Melbourne may now be seen something of the comforts of English homes—neat cottages inclosed in their own garden-grounds—cheerful and commodious looking villas—dwelling-houses aspiring to the dignity of country mansions. In truth, the sentimental and enthusiastic colonist already pictures to himself the time when Melbourne, like London, shall be surrounded with its Chelsea, Putney, Richmond, Windsor, and other delightful retreats.

It is true that the population of the colony is made up of the most heterogeneous masses of human beings that ever before met in any one locality. They are altogether unlike the enthusiastic Puritans who crossed the ocean singing psalms, and plunged into the depths of the American forests armed only with Bibles and the unsubdued "liberty of conscience" as their greatest of treasures. Side by side with the humblest emigrant, seeking employment, are here to be seen the most needy adventurers eager to embark in any undertaking likely to be attended with profitable result. Men of letters without employment, lawyers without briefs, doctors without patients, clerks without offices, ruined nobles, indebted spendthrifts, bankrupt refugees, are to be found clustering among convicts and the sons of convicts, all attracted by one common object, the search for gold. As the attractions of the gold fields have led thousands of Australian convicts to break their fetters and escape to the "diggings," so in England thousands of vagabonds have committed offences that they might have the chance of being transported to the land of gold at the expense of the State. If to these varieties of character are added many shiploads of Chinese, and a large number of Americans, independent in manners, impatient of authority, we have the elements in rude conglomeration of a society having no other object than the violent pursuit of wealth,—no other motive than the grovelling insatiable thirst for gold,—no other law than the liberty of its own will. What unknown society or government is likely to spring from such heterogeneous elements? Is it monarchical, republican, democratic, or despotic? The elements which composed the foundation of ancient Rome were, perhaps, not more unpromising, yet they were such elements as, in the language of Lord Sydney looking forward to an Australian future, constituted "the foundation of a mighty empire!"

MISCELLANEA.

FLAX AND HEMP.

[Communicated by J. B. SHARP, ESQ.]

An Account of FLAX Imported into the United Kingdom, from 1801 to 1853, distinguishing the Quantities received from the Russian Empire from those received from all other Parts; stated in Five Decennial Periods, terminating respectively in 1810, 1820, 1830, 1840, and 1850, and in the Three Years 1851 to 1853.

Years.	From Russia.	From other Parts.	From all Parts.
	Cwts.	Cwts.	Cwts.
1801 to 1810	2,942,357	773,004	3,715,361
1811 „ 1820	2,886,027	684,993	3,571,020
1821 „ 1830	5,426,498	2,371,889	7,798,387
1831 „ 1840	7,453,994	3,780,301	11,234,295
1841 „ 1850	9,975,612	4,248,390	14,224,002
1851 „ 1853	3,063,410	1,441,965	4,505,375
Total quantities im- ported in 53 years ... }	31,747,898	13,300,542	45,048,440
The above quantities reduced to tons.... = }	Tons. 1,587,395	Tons. 665,027	Tons. 2,252,422

A similar Account for HEMP.

Years.	From Russia.	From other Parts.	From all Parts.
	Cwts.	Cwts.	Cwts.
1801 to 1810	6,521,235	468,694	6,989,929
1811 „ 1820	5,323,717	284,210	5,607,927
1821 „ 1830	4,859,096	295,868	5,154,964
1831 „ 1840	5,773,150	1,009,853	6,783,003
1841 „ 1850	5,618,473	2,851,181	8,469,654
1851 „ 1853	2,008,108	1,572,229	3,580,337
Total quantities im- ported in 53 years.... }	30,103,779	6,482,035	36,585,814
The above quantities reduced to tons.... = }	Tons. 1,505,189	Tons. 324,102	Tons. 1,829,291

Quantities of Flax and Hemp received from, and Amount paid to, Russia, in Fifty-three Years.

	Tons.	Average Value.	Amount.
		£	£
Flax	1,587,395	40	63,495,800
Hemp	1,505,189	35	52,681,615
Totals	3,092,584	....	116,177,415

**THE MARRIAGES, BIRTHS, AND DEATHS,
REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.**

*The Marriages for the Quarter ended December, 1853, and the Births and
Deaths for the Quarter ended March, 1854,*

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

This return comprises the births and deaths registered by 2,191 registrars in all the districts of England during the Winter quarter ended March 31st, 1854; and the marriages in 12,039 churches or chapels, about 3,479 registered places of worship unconnected with the Established Church, and 625 superintendent registrars' offices, in the quarter that ended December 31st, 1853.

The return of marriages is not complete; but the defects are inconsiderable, and approximated numbers have been supplied from the records of previous years.

The general aspect of the return is favourable. The marriages in the last quarter of 1853 not only greatly exceeded the mean proportion, but the maximum of the previous years. In the quarter that ended on March 31st, 1854, the births exceeded the average; and the public health of the country was such that the mortality was considerably below the average of the last ten years. The improvement is chiefly in the country districts, as in the towns the deaths rather increased in proportion to the population, and are still, out of the same population, one-third part more numerous than the deaths in the surrounding country.

MARRIAGES.—The number of marriages continues to exceed the average: 97,772 persons were married in the quarter ended December 31st, 1853,—a greater number than has been recorded in any corresponding period since the Registration Act came into force in 1837, and 3,356 in excess of the 94,416 persons who were married in the same period of 1852. On an average of December quarters of the ten years 1844-53, the proportion of marriages to every 100,000 persons living was 999; in the same quarter of 1853 the proportion was 1,075. In the following counties the increase in the number of marriages is most perceptible:—Sussex, Hampshire, Bedfordshire, Essex, Suffolk, Norfolk, Wiltshire, Cornwall, Gloucestershire, Shropshire, Staffordshire—where the marriages in the December quarter of the last five years

*Marriages, Births, and Deaths, returned in the Years 1842-54 and in the Quarters
of those Years.*

YEARS.....	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851*	1852	1853	1854
Marriages	118825	123818	132249	143743	145664	135845	138230	141883	152744	154206	158439	164021	...
Births	517739	527325	540763	543521	572625	539965	563059	578159	593422	615865	624171	612341	...
Deaths	349519	346445	356933	349366	390315	423304	399833	440839	368995	395174	407938	421775	...
MARRIAGES.													
Quarters ended the last day of													
March	25860	25285	26387	29551	31417	27480	28398	28429	30567	32724	32933	35014	...
June	30048	31113	34268	35300	37111	35197	34721	35844	39204	38635	40007	40335	...
September	27258	28847	31675	35003	35070	32439	32995	33874	37636	37316	38291	39786	...
December	35629	38573	39919	43859	42066	40729	42116	43736	45337	45531	47208	48886	...
BIRTHS.													
March	135615	136837	143578	143080	145108	146453	139736	153772	144551	157286	161776	161598	160892
June	134036	131279	136941	136853	149450	139072	149760	153693	155865	159073	159136	158718	...
September	123296	128161	130078	132369	138718	127173	140359	135223	146911	150594	151193	147581	...
December	124732	131048	130166	131219	139349	127267	133204	135471	149605	148912	152066	144444	...
DEATHS.													
March	96314	94926	101024	104664	89484	119672	120032	105870	98430	105306	106682	118241	111970
June	86538	87234	85337	89149	90231	106718	99727	102153	92871	99468	100813	107861	...
September	82339	76792	79708	74572	101663	93435	87638	135227	85849	91381	100497	92332	...
December	84328	87493	90864	80681	108937	103479	92436	97589	91845	99019	99946	103341	...

* The numbers up to 1851 have appeared in the Annual Reports.

have been 1,743, 1,770, 1,782, 1,892, and 2,208 respectively—Worcestershire, Lincolnshire, Derbyshire, the three Ridings of Yorkshire, Durham, Northumberland, Westmorland, Monmouthshire, and South Wales. An increase is apparent in most of the large towns in the coal and iron districts of the Midland and Northern Counties, but many of the chief seats of textile manufactures exhibit a decrease: marriages fell off in Nottingham, Stockport, Great Boughton (Chester), Wigan, Bolton, Bury, Manchester, Burnley, Preston,—in which town the marriages declined from 333 to 258—and in Halifax.

BIRTHS.—160,892 births were registered in the first quarter of the year 1854, being a decrease of 706 as compared with the 161,598 births registered in the corresponding period of 1853. In addition to London the only counties in which an increase in the number of births appears are Surrey, Gloucestershire, Shropshire, Staffordshire, Worcestershire, Warwickshire, Leicestershire, Nottinghamshire, Cheshire, Lancashire, Durham, and South Wales.

INCREASE OF POPULATION.—The births that were registered in the quarter amounted to 160,892, the deaths to 111,970, leaving in the population an excess of 48,922 persons, which is increased on the one hand by the immigration of the Irish or Scotch, and diminished by the emigration of the English. The number of emigrants from the ports of England at which there are Government Emigration Officers was 46,619 in the same time; and the emigrants from all the ports of the United Kingdom were 48,565.

Hitherto the number of emigrants from the United Kingdom has been published in such a manner that it has been impossible to say how many were natives of

England†;—Annual Rate, per cent., of Marriage, Birth, and Death, during the Years 1844-54, and the Quarters of those Years.

Estimated Population of England in thousands in the middle of each Year.....	16516	16716	16919	17124	17331	17541	17754	17977	18195	18195	...	18195
YEARS	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	Mean, 1844-53	1854
Marriages.....	·801	·860	·861	·793	·798	·809	·860	·858	·881	·912	·843	...
Births	3·274	3·251	3·385	3·153	3·249	3·296	3·343	3·426	3·472	3·406	3·326	...
Deaths	2·161	2·090	2·307	2·472	2·307	2·513	2·078	2·198	2·269	2·346	2·274	...
MARRIAGES.												
Quarters ended the last day of												
March	·644	·721	·757	·655	·661	·661	·702	·742	·730	·776	·705	...
June	·834	·849	·882	·826	·805	·822	·888	·864	·883	·891	·854	...
September	·760	·830	·822	·751	·755	·766	·840	·823	·834	·867	·805	...
December	·955	1·038	·983	·940	·961	·986	1·010	1·001	1·038	1·075	·999	...
BIRTHS.												
March	3·507	3·491	3·498	3·488	3·252	3·575	3·321	3·567	3·585	3·581	3·487	3·565
June	3·334	3·291	3·551	3·265	3·474	3·523	3·530	3·557	3·516	3·507	3·455	...
September	3·123	3·110	3·251	2·945	3·211	3·056	3·281	3·321	3·294	3·215	3·184	...
December	3·115	3·103	3·256	2·938	3·085	3·053	3·253	3·274	3·343	3·176	3·155	...
DEATHS.												
March	2·467	2·554	2·157	2·850	2·794	2·462	2·261	2·388	2·364	2·620	2·492	2·481
June	2·077	2·144	2·144	2·506	2·313	2·341	2·107	2·224	2·227	2·383	2·247	...
September	1·913	1·776	2·382	2·163	2·005	3·057	1·917	2·017	2·190	2·012	2·143	...
December	2·175	1·908	2·545	2·389	2·108	2·199	2·045	2·177	2·197	2·272	2·202	...

† The table may be read thus, without reference to the decimal points:—In the year 1818, to 100,000 of the population of England there were 798 marriages, 3,249 births, and 2,307 deaths registered. The annual rates of marriage in each of the four quarters were ·661, ·805, ·755, and ·961 per cent.; the rates of death 2·794, 2·313, 2·005, and 2·108 per cent. In reading the population on the first line add three ciphers (000). The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the two last quarters of the year 92 days. For this inequality a correction has been made in the calculation.

England. In consequence of an instruction from the Secretary of State for the Colonies, the Duke of Newcastle, the information that has been registered for some time, in conformity with the Act of Parliament, has been abstracted, and the Registrar-General is thus enabled to publish the information that he has for several years been endeavouring to obtain; for the Emigration Commissioners have supplied him with returns showing that in 1853 the emigrants from the United Kingdom amounted to 329,937, of whom it was ascertained that 128,787 were adult males, 109,145 were adult females, 67,634 were children of one and under fourteen years of age, and 10,192 were infants. In 14,179 instances no information was obtained.

In 20,349 instances the native country was not stated; of the 309,588 persons remaining, 192,609 were natives of Ireland, 22,605 of Scotland, and 62,915 were natives of England,—so that of a hundred 21 (nearly) of the emigrants were English, 7 Scotch, 62 Irish, and 10 foreigners; or, of 100 emigrants, natives of the United Kingdom, 23 were English, 8 Scotch, and 69 Irish.

The Average Prices of Consols, of Wheat, Meat, and Potatoes, also the Average Quantity of Wheat sold and imported Weekly, in each of the nine Quarters ended March 31st, 1854.

Quarters ended	Average Price of Consols (for Money.)	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase).		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.
					Average Number of Quarters weekly.	Beef.	Mutton.
1852	£						
Mar. 31.	97½	40s. 10d.	95,532	27,540	3½d.—5d. Mean 4½d.	3¾d.—5¾d. Mean 4¾d.	60s.—80s. Mean 70s.
June 30.	99½	40s. 10d.	87,949	54,675	3½d.—4¾d. Mean 4d.	3¾d.—5½d. Mean 4½d.	85s.—110s. Mean 97s. 6d.
Sept. 30.	100	41s. 2d.	78,712	67,912	3½d.—5d. Mean 4½d.	4d.—6d. Mean 5d.	80s.—100s. Mean 90s.
Dec. 31.	100½	40s. 5d.	111,224	72,870	3d.—5d. Mean 4d.	4½d.—6½d. Mean 5½d.	90s.—120s. Mean 105s.
1853							
Mar. 31.	99½	45s. 7d.	95,115	63,530	3¾d.—5½d. Mean 4½d.	4¾d.—6¾d. Mean 5¾d.	110s.—145s. Mean 127s. 6d.
June 30.	100½	44s. 6d.	84,559	82,623	4d.—5¾d. Mean 4¾d.	5d.—6¾d. Mean 5¾d.	110s.—145s. Mean 127s. 6d.
Sept. 30.	97	51s. 10d.	86,087	120,020	4½d.—6d. Mean 5½d.	5d.—7½d. Mean 6½d.	110s.—125s. Mean 117s. 6d.
Dec. 31.	93½	69s. 10d.	79,002	91,627	4d.—6d. Mean 5d.	4¾d.—7d. Mean 5¾d.	135s.—165s. Mean 150s.
1854							
Mar. 31.	91	79s. 6d.	60,022	103,519	4½d.—6½d. Mean 5½d.	4½d.—7d. Mean 5¾d.	120s.—160s. Mean 140s.

Note.—The total number of quarters of wheat sold in England and Wales for the 13 weeks ended March 31st, 1852, was 1,241,921; for the 13 weeks ended June 30th, 1,143,339; for the 13 weeks ended September 30th, 1,023,251; for the 13 weeks ended December 31st, 1,445,906; for the 13 weeks ended March 31st, 1853, 1,236,493; for the 13 weeks ended June 30th, 1853, 1,099,261; for the 13 weeks ended September 30th, 1853, 1,119,128; for the 14 weeks ended December 31st, 1853, 1,106,027; and for the 13 weeks ended March 31st, 1854, 780,282. The total number of quarters entered for Home Consumption was, respectively, 358,024; 710,780; 882,850; 947,310; 825,886; 1,074,095; 1,560,255; 1,191,149 (13 weeks); and 1,345,743.

The births in England and Wales in the year 1853 were 612,341, the deaths 421,775, leaving an excess of 190,566 in the population, which is reduced to 127,651 by the subtraction of the emigrants. As a set-off against the emigrants there is a number of Irish and Scotch immigrants into England, which the census returns show amount to many thousands annually. The population of England is therefore still increasing, but at a less rapid rate than it increased formerly.

PRICES OF PROVISIONS.—The rise in the prices of the chief articles of food which was noticed in the summer and autumn quarters of 1853 has continued during the first three months of the year 1854. The average price of wheat in England and Wales was 45s. 7d. per quarter in the three first months of 1853; in the same period of the present year the price has averaged 79s. 6d. per quarter, being an increase of 75 per cent. The average weekly quantity sold in the cities and towns which make returns was 95,115 quarters, representing an expenditure of about 216,767*l.* weekly in the quarter ended March 31st, 1853, while in the same period of the present year 60,022 quarters have been sold for about 238,587*l.* Meat has been somewhat dearer, and potatoes, which averaged 127s. 6d. per ton at Waterside Market, Southwark, in the quarter ended March 31st, 1853, rose to 140s. in the same period of the present year, being an increase of 10 per cent. Meanwhile the country has been in a prosperous state, and, notwithstanding that “strikes” have prevailed in some places, the working class on the whole have been apparently well employed at good wages.

STATE OF THE PUBLIC HEALTH.—The returns from all England and Wales for the first quarter of this year record the deaths of 111,970 persons. The general result is, that while on an average of ten winter quarters 2·492 persons died annually out of 100 living, in the last quarter the proportion was 2·481. The people were subject to rather less than the ordinary rate of mortality, and although many suffered fatally from severe weather near the commencement of the quarter, and sudden changes during its course, the class of diseases that prevail among children appears to have been more subdued.

Deaths in the Winter Quarters.

	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	Total 1844-53	1854
In 117 Dis- tricts, com- prising the chief towns...	46136	49996	43850	56105	57710	51017	46066	52333	52408	57092	512713	56300
In 507 Dis- tricts, com- prising chiefly small towns and country parishes	54888	54665	45634	63567	62322	54853	52364	52973	54274	61149	556692	55670
Total.....	101024	104661	89484	119672	120032	105870	98430	105306	106682	118241	1069405	111970

Population, Deaths, and Mortality per cent. in the Winter Quarters, 1844-54.

	Population Enumerated.		Deaths in 10 Winter Quarters, 1844-53.	Annual Rate of Mortality of 10 Winter Quarters, 1844-53.	Annual Rate of Mortality in the Winter Quarter 1854.
	June 6-7th, 1841.	March 31st, 1851.			
In 117 Districts, com- prising the chief towns	6,612,958	7,795,882	512,713	2·833	2·847
In 507 Districts, com- prising chiefly small towns and country parishes	9,301,190	10,126,886	556,692	2·284	2·183
All England	15,914,148	17,922,768	1,069,405	2·492	2·481

MORTALITY OF THE METROPOLIS.

A Table of the Deaths in London from all Causes, Registered in the March Quarters of the Four Years, 1851-54.

CAUSES OF DEATH.	Quarters ended Mar.,				CAUSES OF DEATH.	Quarters ended Mar.,			
	1851	1852	1853	1854		1851	1852	1853	1854
ALL CAUSES.....	15,410	14,481	15,804	16,534	III. Scrofula.....	87	131	96	112
SPECIFIED CAUSES.....	15,323	14,303	15,718	16,382	Tabes Mesenterica.....	175	198	185	201
I. Zymotic Diseases.....	2,969	2,702	2,801	3,254	Phthisis or Consumption.....	1,792	1,811	1,872	1,860
<i>Sporadic Diseases:</i>					Hydrocephalus.....	418	448	433	450
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat.....	631	605	610	705	IV. Cephalitis.....	138	160	140	173
III. Tubercular Diseases.....	2,472	2,583	2,586	2,072	Apoplexy.....	314	290	369	368
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses.....	1,634	1,625	1,805	1,860	Paralysis.....	280	316	326	303
V. Disease of the Heart and Blood Vessels.....	605	655	643	601	Delirium Tremens.....	30	29	42	34
VI. Diseases of the Lungs and of the other Organs of Respiration.....	3,522	2,840	3,585	3,306	Chorea.....	2	3	2	2
VII. Diseases of the Stomach, Liver, and other Organs of Digestion.....	815	819	821	880	Epilepsy.....	82	82	110	94
VIII. Diseases of the Kidneys, &c.....	150	194	188	190	Tetanus.....	7	0	2	5
IX. Childbirth, Diseases of the Uterus, &c.....	100	112	118	131	Insanity.....	52	28	30	58
X. Rheumatism, Diseases of the Bones, Joints, &c.....	100	116	122	107	Convulsions.....	572	551	617	592
XI. Diseases of the Skin, Cellular Tissue, &c.....	22	40	42	50	Disease of Brain, &c.....	177	154	176	201
XII. Malformations.....	42	50	53	63	V. Pericarditis.....	47	33	28	37
XIII. Premature Birth and Debility.....	300	301	405	512	Aneurism.....	20	10	23	22
XIV. Atrophy.....	283	300	390	494	Disease of Heart, &c.....	598	605	502	602
XV. Age.....	606	676	781	675	VI. Laryngitis.....	73	67	79	107
XVI. Sudden*.....	218	127	126	101	Bronchitis.....	1,012	1,422	1,880	1,601
XVII. Violence, Privation, Cold, and Intemperance.....	573	505	570	586	Pleurisy.....	572	591	49	46
					Pneumonia.....	1,244	968	1,083	1,113
I. Small Pox.....	275	380	62	123	Asthma.....	383	266	357	291
Measles.....	303	151	184	344	Disease of Lungs, &c.....	139	138	137	113
Scarlatina.....	206	306	574	417	VII. Teething.....	104	178	175	219
Whooping Cough.....	781	530	702	941	Quinsey.....	18	8	23	10
Croup.....	160	67	93	145	Gastritis.....	18	18	17	17
Thrush.....	84	34	26	41	Enteritis.....	87	83	79	77
Diarrhoea.....	223	225	221	308	Peritonitis.....	54	65	49	56
Dysentery.....	30	28	28	40	Ascites.....	33	32	38	33
Cholera.....	7	13	7	7	Ulceration of Intestines, &c.....	27	34	34	42
Influenza.....	265	40	51	27	Hernia.....	40	46	43	45
Purpura and Scurvy.....	9	10	15	11	Ileus.....	30	27	39	46
Ague.....	3	7	3	5	Intussusception.....	9	10	14	16
Remittent Fever.....	32	25	23	36	Stricture (of the Intestinal Canal).....	9	10	7	6
Infantile Fever.....	18	14	15	10	Disease of Stomach, &c.....	61	84	76	78
Typhus.....	521	527	602	582	Disease of Pancreas.....	4	...	...	...
Metria, or Puerperal Fever, see Childbirth.....	47	62	44	42	Hepatitis.....	55	39	47	45
Rheumatism, see Rheumatism.....	10	18	18	20	Jaundice.....	40	42	40	39
Erysipelas.....	81	120	80	66	Disease of Liver.....	131	138	147	159
Syphilis.....	32	36	42	46	Disease of Spleen.....	2	4	2	2
Noma or Canker, see Mortification.....	4	1	5	7	VIII. Nephritis.....	9	7	11	12
Hydrophobia.....	45	63	46	56	Nephria (or Bright's Disease).....	46	46	54	50
II. Hemorrhage.....	231	220	236	224	Ichuria.....	5	3	2	3
Dropsy.....	24	17	32	38	Diabetes.....	9	13	11	14
Ulcer.....	21	12	16	27	Stone.....	4	5	11	10
Fistula.....	7	3	6	10	Cystitis.....	12	14	5	7
Mortification.....	60	44	46	55	Stricture of Urethra.....	12	13	13	14
Cancer.....	299	231	243	281	Disease of Kidneys, &c.....	65	93	81	80
Gout.....	11	15	15	20	IX. Paramecia.....	3	3	2	1
					Ovarian Dropsy.....	8	12	10	17
					Childbirth, see Metria.....	65	62	68	77
					Disease of Uterus, &c.....	30	35	38	36
					X. Arthritis.....	3	8	5	5
					Rheumatism.....	60	60	69	64
					Disease of Joints, &c.....	40	42	48	30
					XI. Carbuncle.....	3	17	20	25
					Phlegmon.....	5	9	10	16
					Disease of Skin, &c.....	14	14	12	9
					XVII. Intemperance.....	23	19	22	29
					Privation.....	13	12	10	12
					Want of Breast Milk, see Privation and Atrophy.....	50	61	56	76
					Neglect.....	1	...	2	1
					Cold, see Privation.....	4	...	5	10
					Poison.....	20	23	24	17
					Burns and Scalds.....	190	88	138	133
					Hungry, &c.....	71	76	72	60
					Drowning.....	70	72	68	50
					Fractures and Contusions.....	163	161	181	141
					Wounds.....	84	35	25	24
					Other Violence.....	9	11	13	18
					Causes not specified.....	87	82	146	152

NOTE.—The first 13 weeks of 1854, constituting the March quarter in the Weekly Tables of Mortality, ended April 1st, in which 16,534 deaths were registered. In the quarter ended March 31st 16,383 deaths were registered.

* Under the head of *sudden deaths* are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the coroner in vague terms, such as "found dead," "natural causes," &c., &c.

On the Meteorology of England and Scotland during the Quarter ended March 31st, 1854. By JAMES GLAISHER, ESQ., F.R.S., Sec. of the British Meteorological Society.

The weather during the past quarter has been very remarkable in many respects. The cold, which set in on November 9th, continued with great severity till January 6th, and a heavier fall of snow occurred on January 3rd over the greater part of England than has taken place for many years. On December 29th the reading of the barometer began to decrease rapidly, and continued so till January 1st, but not in an equal degree at all places. The diminution was much greater in Jersey, Guernsey, the Isle of Wight, Cornwall, and Devonshire than elsewhere. From the 2nd to the 3rd the readings still decreased at the above places, extending to the extreme south coast of England, and increased at all places north of the latitude of 51° . From the 3rd to the 4th the readings decreased, but to a greater extent at southern than at northern stations. After this time the readings turned to increase in the south, whilst they decreased in the north. It is of rare occurrence for the atmospheric pressure to vary so greatly in its distribution over places so little separated. The reading was very low at all places, and the length of time during which these low readings prevailed was very remarkable.

Respecting the variations of temperature during those days, it is worthy of remark that those stations where the reading of the barometer continuously fell, were subjected to very little variation of temperature, whilst those where it increased and decreased were subjected to great changes and to low temperatures. Although the weather was cold, it was not eminently so till beyond some distance from the south coast of England, and the extreme severity of the 3rd was not at all felt south of the parallel of Uckfield, with perhaps the exception of Brighton. On the night of the 2nd the temperature between the parallels of 51° and 54° decreased to a very low point, but did not do so beyond those parallels either north or south. About London and its vicinity it fell early in the morning of the 3rd to 13° , 12° , 11° , and 10° . It had reached these low points at one o'clock in the morning, and did not rise above them till after eight o'clock. It was most severely felt in the Midland counties, where the reading was as low as zero, and it was noted by Mr. Lowe at -4° . This was the lowest reading recorded by any one with trustworthy instruments. At Manchester it was as low as 3° , as noted by Mr. Vernon; but at places situated very near each other the points differed very considerably. It was at about the time of these low temperatures that the heavy fall of snow took place. The wind was from east at most places. A gale was blowing over Jersey and Guernsey; it was very squally and stormy all day at the Isle of Wight, and over Cornwall and Devonshire. At the same time a fog hung over the Midland Counties. The air was calm in the north in the morning, and a fresh wind rose in the afternoon. The fall of snow was greatest over those parallels of latitude which had been remarkable for prevalence of fog in November and of frequency of falls of snow in December. In parts of Cornwall there was little or no snow, and but comparatively little on the south coast, west of the Isle of Wight. In London and its vicinity it averaged on the level about 12 inches. On the Norfolk coast it fell to the depth of 18 inches. At Whitehaven scarcely an inch fell, whilst at Liverpool and other places in the same parallels the falls were from 6 to 10 and 14 inches. Towards the north the falls were less heavy; and at Allenheads, situated among the mountainous district of Northumberland, there was none. Heavy falls of snow had occurred previously, and at the time of the great and general fall it lay on the ground to the depth of several feet. The drifts averaged from 3 to 10, 12, and 15 feet, and were deepest at Derby, Grantham, and on the Norfolk coast. At the Isle of Man were drifts to the depth of 10 feet.

On January 1st and 2nd the average daily temperature was 10° below their averages, on the 3rd it was as much as 14° below, and till the 6th the average daily defect was 7° . On the 7th a period of warm weather set in, and continued till February 9th; the average daily excess of temperature was $4^{\circ}8$. From February 10th to the 19th the weather was cold; the average daily defect was $3^{\circ}1$; and from February 20th to the end of the quarter the average daily excess of mean temperature was $2^{\circ}7$.

The reading of the barometer has been remarkable during a great part of the quarter. On 1st January, at the level of the sea, it was 29.54 in.; it decreased by the 5th, when the lowest reading during the quarter took place, viz., 29.00 in. It

continued low for some days; was 30·34 in. on the 21st; decreased to 29·63 in. by the 24th; increased quickly to 30·63 in. by the 26th; decreased to 29·83 in. by the 29th; increased to 30·40 in. by 3rd February; decreased to 29·91 in. by the 5th; increased to 30·73 in. by the 14th; decreased to 29·48 in. by the 17th; attained a reading on 4th March higher than any since January, 1835, viz., 30·85 in.; decreased to 29·98 in. by the 13th; increased to 30·52 in. by the 17th; decreased to 30·04 in. by the 18th; increased to 30·59 in. by the 22nd; decreased to 29·96 in. by the 26th; and increased to 30·47 in. by the end of the quarter.

The mean reading for January was low; it was high in February and March. In a register from 1771 there is no instance of so high a reading in March; the nearest approach was in 1834, and there is no instance of so high a mean reading for the months of February and March in the period from 1771.

The fall of rain was about its average in January, and fell short of the average in February and March. The general deficiency for the quarter is 2 inches. The fall from November to the end of March was about 5½ inches, and is less than the fall in the same five months than any in the present century. The general direction of the wind till 28th January was S.E.; from then till 9th February it was S.W.; from 9th February to the 19th N.W.; and mostly S.W. from 20th February to the end of the quarter.

The mean temperature of the air at Greenwich for the quarter ended February, constituting the three winter months, was 37°·5, being 0°·1 below the average of eighty years.

Thunderstorms occurred, or thunder was heard and lightning seen, on the 20th January at Falmouth, Truro, and Exeter; on the 21st at Whitehaven; and on the 26th at Nottingham and Wakefield. On the 17th February at Manchester, and on the 18th at Clifton.

Thunder was heard, but lightning was not seen, on the 16th January at North Shields, and on the 20th at Clifton. On the 8th February at Grantham.

Lightning was seen, but thunder was not heard, on the 3rd January at Nottingham; on the 6th at Helston and Falmouth; on the 7th at Falmouth and Truro; on the 25th at Whitehaven; and on the 28th at Norwich. On the 7th February at the Isle of Man.

Hail fell on the 1st January at Helston; on the 2nd at Guernsey; on the 4th at Dunino and Arbroath; on the 5th at North Shields, Dunino, and Arbroath; on the 6th at Helston, North Shields, Dunino, and Arbroath; on the 7th and 8th at Guernsey; on the 9th at Guernsey, North Shields, Dunino, and Arbroath; on the 10th at Dunino and Arbroath; on the 15th at North Shields; on the 20th at Helston, Rose Hill, Oxford, Linsdale, and Hawarden; on the 26th at Grantham and Nottingham; and on the 28th at Stone, Hartwell House, Hartwell Rectory, Linslade, Grantham, and Hawarden. On the 4th February at Warrington; on the 6th at Hawarden; on the 7th at Linslade, Wakefield, Stonyhurst, Isle of Man, and Durham; on the 8th at Guernsey and Bedford; on the 9th at Stone, Hartwell House, Hartwell Rectory, Bedford, Hawarden, Gainsborough, Durham, and North Shields; on the 10th and 11th at Norwich; on the 15th at Guernsey; on the 17th at Guernsey, Exeter, Rose Hill, Bicester, Oxford, Linsdale, Bedford, Grantham, Hawarden, Liverpool, Manchester, Wakefield, Stonyhurst, Isle of Man, and Durham; on the 18th at Jersey, Guernsey, Helston, Truro, Torquay, Exeter, and Isle of Man; and on the 19th at North Shields. On the 15th March at Stonyhurst; on the 16th at Hawarden; on the 18th at Linsdale, Bedford, Hawarden, and North Shields; on the 19th at Truro, Lewisham, Greenwich, Oxford, Stone, and Hartwell Rectory; on the 26th at Linslade and Stonyhurst; and on the 30th at Hawarden and Dunino.

Snow fell on twenty-six days in January, sixteen in February, and on three in March.

Fog was prevalent on twenty-one days in January, twelve days in February, and fifteen days in March.

Auroræ were seen on seven days in January, twelve days in February, and on fifteen days in March. The magnets were disturbed on all these days.

Zodiacal light was seen on the 18th February at Nottingham; on the 23rd at Hartwell House; on the 25th at Stone; on the 26th at Stone and Hartwell House; and on the 28th at Hartwell House. On the 1st March at Nottingham.

Solar Halos were seen on nineteen days during the quarter.

Lunar Halos were seen on thirty-one days during the quarter.

Meteorological Table, Quarter ended March 31st, 1854.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	WIND.		Mean Amount of Cloud.	RAIN.		Mean Degree of Humidity.
								Mean estimated Strength.	General Direction.		Number of Days on which it fell.	Amount collected.	
Jersey	in. 29.937	43.2	55.0	30.0	7.5	26.7	25.0	1.4	S.W. & N.E.	4.9	36	5.2	0.898
Falmouth .....	....	45.5	61.0	30.0	12.0	26.7	31.0	1.5	S.W. & W.	6.1	51	8.7	....
Truro	29.889	44.7	60.0	26.0	12.7	30.3	34.0	1.4	Var.	6.4	56	8.6	0.842
Torquay .....	....	43.6	57.0	29.0	9.0	24.0	28.0	2.8	S.W., W., & N.E.	....	36	5.0	0.819
Newport	29.932	42.0	64.6	23.1	12.9	32.8	41.5	2.5	W., S.W., & N.W.	5.9	31	5.1	0.847
Worthing	29.895	40.9	56.5	23.4	8.3	25.8	33.1	1.4	S.W. & N.W.	5.8	35	3.7	0.896
Southampton	29.875	41.7	60.5	24.0	13.5	31.4	36.5	0.1	....	6.7	....	....	0.886
Clifton	29.907	40.7	60.3	15.0	11.9	33.2	45.3	0.9	W., S.W., & N.W.	5.8	35	4.9	0.872
Royal Observatory	29.897	40.8	64.2	13.5	14.5	37.8	50.7	....	S.W. & N.W.	6.9	30	3.1	0.852
Oxford	29.901	40.8	60.8	12.4	12.9	36.8	48.4	1.5	S.W. & N.W.	6.6	35	3.4	0.831
Linslade	29.906	39.2	61.0	11.0	14.3	37.7	50.0	....	S.W. & N.W.	....	33	3.6	0.858
Royston	29.906	40.9	63.9	11.3	12.2	36.6	52.6	....	S.W., W., & N.W.	5.7	....	3.9	0.852
Bedford	29.852	41.5	64.0	12.0	12.4	37.8	52.0	1.0	Var.	.9	23	3.6	0.834
Norwich .....	....	39.6	62.0	11.0	12.8	38.7	51.0	....	S., S.W., & W.	....	34	2.4	....
Derby .....	....	39.9	62.0	4.0	13.2	39.3	58.0	....	N.W.	....	42	4.2	0.827
Holkham	29.852	39.7	61.6	4.0	12.4	39.9	57.6	1.5	S., W., & S.W.	5.5	37	4.5	0.865
Nottingham	29.920	40.0	64.3	4.0	15.7	43.8	68.3	0.4	S.W. & W.	6.4	34	4.2	0.835
Gainsborough	29.857	39.9	61.5	5.0	11.2	37.5	56.5	0.8	S., S.W., & N.W.	5.1	35	3.8	0.831
Warrington	29.835	40.7	58.3	5.7	10.7	36.4	52.6	0.6	S.W., W., & N.W.	5.8	46	6.1	0.882
Liverpool	29.865	42.1	56.7	20.1	7.9	26.1	36.6	1.2	N.W., S.E., & S.	6.3	37	3.9	0.842
Manchester	29.825	40.2	64.5	3.5	14.9	39.3	61.0	....	S.W., N.W., & W.	7.2	48	7.4	0.880
York	29.794	38.9	61.0	3.0	11.1	38.7	64.0	....	W. & S.E.	....	22	3.3	0.891
Durham	29.718	39.8	56.9	11.0	9.6	36.2	45.9	2.3	S.W., N.W., & W.	7.4	30	6.1	0.915
Dummo	29.744	38.6	59.0	16.0	12.4	32.3	43.0	2.4	S.W.	4.4	33	4.8	0.831
Arbroath	29.683	38.3	61.0	17.0	12.7	32.0	44.0	1.1	W., N.W., & S.W.	6.2	35	4.3	0.828

REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ended 5th July, 1853 and 1854; showing the Increase or Decrease thereof.—(Continued from page 183.)

[Compiled from the "London Gazette."]

Sources of Revenue.	Years ended 5th July.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs.....	18,954,362	18,503,838	....	450,524
Excise	13,737,599	13,302,263	....	435,336
Stamps	6,477,347	6,525,423	48,076	....
Taxes.....	3,201,047	3,167,145	....	33,902
Property Tax	5,589,079	6,024,244	435,165	....
Post Office.....	1,066,000	1,232,000	166,000	....
Crown Lands.....	392,888	260,000	....	132,888
Miscellaneous	159,862	132,895	....	26,967
Total Ordinary Revenue	49,578,184	49,147,806	649,241	1,079,617
Imprest and other Moneys .	758,789	817,266	58,477	....
Repayments of Advances....	1,322,469	1,219,999	....	102,470
Total Income.....	51,659,442	51,185,073	707,718	1,182,087
Deduct Increase				707,718
Decrease on the Year				474,369

Sources of Revenue.	Quarters ended 5th July.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs	4,943,337	4,575,843	....	367,494
Excise	3,795,617	3,624,008	....	171,609
Stamps	1,675,148	1,705,633	30,485	....
Taxes.....	1,510,483	1,435,927	....	74,556
Property Tax	1,053,027	1,101,594	48,567	....
Post Office.....	251,000	379,000	128,000	....
Crown Lands.....	200,888	65,000	....	135,888
Miscellaneous	90,537	55,888	....	34,649
Total Ordinary Revenue	13,520,037	12,942,893	207,052	784,196
Imprest and other Moneys .	256,759	139,716	....	117,043
Repayments of Advances....	424,573	305,971	....	118,602
Total Income.....	14,201,369	13,388,580	207,052	1,019,841
Deduct Increase				207,052
Decrease on the Quarter				812,789

Consolidated Fund Operations.—The total income brought to this account in the quarter ended 5th July, 1854, was 13,920,330*l.* The total charge upon it was 7,755,799*l.*, leaving a surplus of 6,164,531*l.*

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Second Quarter of 1854; together with the Monthly and Quarterly Average—(Continued from p. 189.)

[Communicated by the Comptroller of Corn Returns, H. F. JADIS, Esq.]

Weeks ended on a Saturday, 1854.		Weekly Average.					
		Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
April	1	75 0	37 8	26 10	53 1	44 3	45 7
"	8	73 5	36 2	26 11	48 9	44 3	43 1
"	15	78 3	36 10	27 6	44 0	45 7	42 8
"	22	79 11	37 5	27 6	48 5	47 0	44 0
"	29	79 5	37 3	28 9	63 0	46 7	43 6
Average for April		77 2	37 0 $\frac{3}{4}$	27 6	51 5	45 6	43 9
May	6	79 9	37 0	28 8	47 4	47 10	44 9
"	13	78 9	37 1	29 5	52 1	48 9	46 9
"	20	78 2	37 2	29 4	48 6	49 3	47 2
"	27	78 9	37 1	29 11	53 11	49 4	44 7
Average for May		78 10	37 1	29 4	50 5	48 9	45 9 $\frac{3}{4}$
June	3	79 11	36 9	29 10	48 7	48 6	46 10
"	10	78 9	37 1	30 8	49 3	49 3	47 6
"	17	78 3	37 3	29 5	48 11	49 10	46 6
"	24	77 11	37 1	30 6	52 2	50 3	48 10
Average for June		78 8	37 0	30 1	49 8 $\frac{3}{4}$	49 6 $\frac{3}{4}$	47 4
Average for the Quarter ..		78 4 $\frac{1}{2}$	37 0	29 1 $\frac{3}{4}$	50 2 $\frac{1}{2}$	48 2	45 7 $\frac{3}{4}$

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ended 5th April, 5th May, and 5th June, 1854; the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouses at the close thereof.—(Continued from p. 189.)

[Compiled from the "London Gazette."]

WHEAT.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1854.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th April	567,220	..	567,220	567,220	..	567,220	..	..	..
5th May	474,291	1,820	476,111	..	..	..	..	..	..
5th June	611,911	82	611,993	..	..	..	..	..	..

WHEAT-FLOUR.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1854.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th April	600,264	28	600,292	600,264	28	600,292	..	..	..
5th May	512,700	2,073	514,773	..	..	..	..	..	..
5th June	373,686	76	373,762	..	..	..	..	..	..

Fluctuations in the Stock and Share Market during the Months of April, May, and June, 1854.—(Continued from p. 190.)

Stocks and Shares.	Amount of Share.			Amount Paid.			Price on the			Highest Price during the Months of			Lowest Price during the Months of		
	April.	May.	June.	April.	May.	June.	1st April.	2nd May.	1st June.	April.	May.	June.	April.	May.	June.
Consols .....	...	...	...	...	...	...	86½	87½	89½	89½	91½	94½	85½	87½	89½
Exchequer Bills .....	...	...	...	...	...	...	2s. Dis.	1s. 6d.	1s. 6d.	6s. Pm.	4s. Pm.	5s. Pm.	2s. Dis.	2s. Dis.	2s. Dis.
RAILWAYS—															
Brighton	Stock	Stock	Stock	100	100	100	94	98	103	99	103	107	94	97½	101
Calcuttan	Stock	Stock	Stock	100	100	100	50½	53½	57	54	57½	65½	50½	53½	57
Eastern Counties	Stock	Stock	Stock	20	20	20	11½	12½	13½	12½	13½	13½	11½	12½	13½
Great Northern	Stock	Stock	Stock	100	100	100	85½	87	89½	87½	89½	92	84½	85	88½
Great Western	Stock	Stock	Stock	100	100	100	71½	73	75½	74½	76	80½	71½	74½	75½
London and North-Western	Stock	Stock	Stock	100	100	100	94	96½	99½	99½	99½	108	94	95½	98½
Midland	Stock	Stock	Stock	100	100	100	56½	58½	60½	60	61½	68½	56½	58½	60½
North Staffordshire	Stock	Stock	Stock	100	100	100	59½	61	62½	62	62½	68½	59½	61	62½
North-Eastern	20	20	20	17½	17½	17½	10½	10½	10½	11	13½	14	10½	10½	12½
South-Eastern	Stock	Stock	Stock	100	100	100	57½	59½	63½	60	63	66½	57½	58	62
South-Western	Stock	Stock	Stock	100	100	100	74	77	79	78½	79	85½	73½	76½	79
York, Newcastle, & Berwick	Stock	Stock	Stock	100	100	100	63½	65	67½	66	67½	75½	63½	64	67½
York and North Midland	Stock	Stock	Stock	100	100	100	44	46	49	40½	49	57½	44	44½	49
Northern of France	20	20	20	16	16	16	28½	30	33½	30½	33½	35	28	29½	33½
East Indian	20	20	20	20	20	20	21	22	22	22½	22	22½	20½	21½	22

Average Price of Meat as sold in Smithfield Market in the Months of April, May, and June, 1854.—(Continued from p. 190.)

[Communicated by W. D. OSWALD, Esq., of the Board of Trade.]

Description.	April.			May.			June.			Description.	April.			May.			June.		
	s.	d.		s.	d.		s.	d.			s.	d.		s.	d.		s.	d.	
Inferior Beasts	3	4		3	10		3	6		Coarse Calves	s.	d.		s.	d.		s.	d.	
2nd class	3	8		4	2		4	0		Small Prime Calves	4	10		4	4		4	2	
3rd class	4	0		4	6		4	4		Large Hogs	5	6		5	0		5	0	
4th class (Scots)	4	6		5	0		5	0		Small Neat Porks	3	9		4	2		3	8	
											4	6		4	10		4	8	

N.B.—Price of Meat at the rate of 8 lbs. Avoirdupois to the stone, sinking the offal.

CURRENCY.

BANK OF ENGLAND.

An Account, pursuant to the Act 7th and 8th Victoria, c. 32, for each Week ended on a Saturday, for the Second Quarter of 1854.—(Continued from p. 191.)

[Compiled from the "London Gazette."]

ISSUE DEPARTMENT.

Date.	Notes Issued.	Notes in hands of Public.	Government Debt.	Other Securities.	Gold Coin and Bullion.	Silver Bullion.
1854.	£	£	£	£	£	£
April 1	27,682,495	21,684,240	11,015,100	2,984,900	13,682,495	...
" 8	27,379,605	22,410,850	11,015,100	2,984,900	13,379,605	...
" 15	26,768,480	22,490,355	11,015,100	2,984,900	12,768,480	...
" 22	26,562,010	22,270,195	11,015,100	2,984,900	12,562,010	...
" 29	26,188,460	22,247,320	11,015,100	2,984,900	12,188,460	...
May 6	25,874,730	21,974,300	11,015,100	2,984,900	11,874,730	...
" 13	25,857,270	21,143,990	11,015,100	2,984,900	11,857,270	...
" 20	25,779,095	20,679,065	11,015,100	2,984,900	11,779,095	...
" 27	26,012,250	20,459,540	11,015,100	2,984,900	12,012,250	...
June 3	26,006,875	20,540,330	11,015,100	2,984,900	12,006,875	...
" 10	25,981,750	20,314,105	11,015,100	2,984,900	11,981,750	...
" 17	26,373,255	19,700,575	11,015,100	2,984,900	12,373,255	...
" 24	27,132,635	19,614,235	11,015,100	2,984,900	13,132,635	...

BANKING DEPARTMENT.

Date.	Proprietors' Capital.	Rest.	Public Deposits.	Other Deposits.	Seven Day and other Bills.	Total Dr.
1854.	£	£	£	£	£	£
April 1	14,553,000	3,757,576	4,445,768	11,037,153	1,102,303	34,895,820
" 8	14,553,000	3,154,657	2,653,754	13,819,988	1,177,753	35,389,152
" 15	14,553,000	3,160,726	1,765,364	12,795,201	1,196,079	33,470,370
" 22	14,553,000	3,166,453	1,767,723	12,053,525	1,189,099	32,729,800
" 29	14,553,000	3,172,183	2,018,493	11,316,805	1,126,996	32,187,477
May 6	14,553,000	3,204,862	2,338,822	10,688,531	1,164,631	31,949,846
" 13	14,553,000	3,214,897	2,748,437	10,587,010	1,111,563	32,214,907
" 20	14,553,000	3,225,731	2,671,551	10,146,428	1,069,784	31,666,494
" 27	14,553,000	3,227,045	2,489,944	10,283,180	1,026,415	31,579,584
June 3	14,553,000	3,180,665	2,557,654	10,212,244	1,057,090	31,560,653
" 10	14,553,000	3,187,682	2,993,668	10,483,130	1,020,893	32,238,373
" 17	14,553,000	3,194,253	3,212,382	10,513,491	1,030,412	32,503,538
" 24	14,553,000	3,202,523	4,652,805	10,114,383	968,286	33,690,997

Date.	Government Securities.	Other Securities.	Notes.	Gold and Silver Coin.	Total Cr.
1854.	£	£	£	£	£
April 1	11,607,816	16,522,726	5,998,255	767,323	34,895,820
" 8	13,939,132	15,720,271	4,968,755	760,994	35,389,152
" 15	13,686,596	14,763,256	4,278,125	742,393	33,470,370
" 22	13,349,067	14,336,835	4,291,815	752,083	32,729,800
" 29	13,080,679	14,438,192	3,941,140	727,466	32,187,477
May 6	12,566,607	14,749,460	3,900,430	733,349	31,949,846
" 13	11,625,492	15,144,039	4,713,280	732,096	32,214,907
" 20	10,406,309	15,425,281	5,100,030	734,874	31,666,494
" 27	9,856,309	15,441,966	5,552,710	728,599	31,579,584
June 3	9,856,309	15,494,525	5,466,545	743,274	31,560,653
" 10	10,024,481	15,799,944	5,667,645	746,303	32,238,373
" 17	9,720,499	15,374,237	6,672,680	736,122	32,503,538
" 24	9,851,250	15,584,007	7,518,400	737,340	33,690,997

CURRENCY.—Continued.

COUNTRY BANKS.

Average amount of Promissory Notes in Circulation in England and Wales in each week, ended on a Saturday, for the Second Quarter of 1854.—(Continued from page 192.)

[Compiled from the "London Gazette."]

ENGLAND AND WALES.			
Date.	Private Banks.	Joint Stock Banks.	Total.
1854.	£	£	£
Mar. 25.....	3,817,983	3,137,564	6,955,547
April 1.....	3,875,154	3,180,756	7,055,910
„ 8.....	3,953,648	3,169,847	7,123,495
„ 15.....	3,971,010	3,124,448	7,095,458
„ 22.....	3,978,178	3,151,025	7,129,203
„ 29.....	3,969,211	3,147,220	7,116,431
May 6.....	3,946,339	3,127,684	7,074,023
„ 13.....	3,906,376	3,114,822	7,021,198
„ 20.....	3,837,630	3,106,936	6,944,566
„ 27.....	3,765,817	3,030,183	6,796,000
June 3.....	3,737,009	2,993,741	6,730,750
„ 10.....	3,700,026	2,962,017	6,662,043
„ 17.....	3,637,526	2,952,017	6,589,543
„ 24.....	3,615,350	2,933,274	6,548,624

Fixed Issues—Private Banks, £4,607,455; Joint Stock Banks, £3,325,857.

Average amount of Promissory Notes in Circulation in Scotland and Ireland during the Months ended the 15th of April, the 13th of May, and the 10th of June, 1854.—(Continued from page 192.)

SCOTLAND.			
Date.	£5 and above.	Under £5.	Total.
1854.	£	£	£
April 15.....	1,314,003	2,520,091	3,834,094
May 13.....	1,398,615	2,568,986	3,967,601
June 10.....	1,530,290	2,788,804	4,319,094

IRELAND.			
Date.	£5 and above.	Under £5.	Total.
1854.	£	£	£
April 15.....	2,875,933	3,765,476	6,641,409
May 13.....	3,028,100	3,557,420	6,585,520
June 10.....	2,884,722	3,295,563	6,180,285

Fixed Issues—Scotland, £3,087,269; Ireland, £6,354,494.

QUARTERLY JOURNAL
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DECEMBER, 1854.

The Laws of the Currency, as exemplified in the Circulation of Country Bank Notes in England, since the passing of the Act of 1844. By J. W. GILBART, F.R.S.

[Read before the Statistical Section of the British Association for the Advancement of Science, at Liverpool, 22nd September, 1854.]

It is a gratifying circumstance that questions relating to the currency are no longer connected with party politics, but are now regarded as presenting topics for scientific investigation; and we believe that by no science can they be more clearly and successfully investigated than by the science of statistics.

Our inquiries in this paper will be limited to that portion of our currency which consists of notes issued by country bankers, and we shall consider them chiefly in reference to those fluctuations in the amount of their circulation, which have occurred since the passing of the Act of 1844.

1. Country bank notes were originally called Goldsmiths' notes, similar notes having been first issued by the goldsmiths of London.

"That part of the business of banking which consists in the borrowing of money, with a view of lending it again at a higher rate of interest, does not appear to have been carried on by bankers until the year 1645, when a new era occurred in the history of banking. The goldsmiths, who were previously only money-changers, now became also money-lenders. They became also money-borrowers, and allowed interest on the sums they borrowed. They were agents for receiving rents. They lent money to the king on the security of the taxes. The receipts they issued for the money lodged at their houses circulated from hand to hand, and were known by the name of 'Goldsmiths' notes.' These may be considered as the first kind of bank notes issued in England.

"When our merchants became enriched by commerce, they wished for a place of security in which they might deposit their wealth. Hence they usually sent their money to the mint in the Tower of London, which became a sort of bank. The merchants left their money here when they had no occasion for it, and drew it out as they wanted it. But in 1640, King Charles I. took possession of 200,000*l.* of the merchants' money that had been lodged in the

mint, and from that period the merchants kept their money in their own houses, under the care of their servants and apprentices. On the breaking out of the civil war between Charles I. and the Parliament, it became very customary for the apprentices to rob their masters, and then run away and join the army. As the merchants could now place no confidence either in the public authorities or in their own servants, they were under the necessity of employing bankers. These bankers were the goldsmiths.”*

“Amid the troubles of those times, when public trust was shaken, Money for safer custody was to the Goldsmiths’ taken.”†

Bank notes are frequently referred to in our Acts of Parliament, as “Bankers’ or Goldsmiths’ notes.”—In the Act of 1704, which removed all “doubts” as to their legality, they are mentioned as “notes made and signed by any person or persons, body public or corporate, or by the servant or agent of any corporation, banker, goldsmith, merchant, or trader.” Even the notes issued in Ireland were called goldsmiths’ notes. By an Act of the Irish Parliament passed in 1709, “notes issued by any banker, goldsmith, merchant, or trader, whether payable to order or bearer, were rendered assignable and indorsable over as inland bills of exchange.” And in 1729, the forgery of bills of exchange, goldsmiths’, or bankers’ notes, above the value of 5*l.* was declared felony, and the felon was to be burnt in the hand or transported at the pleasure of the Court.

After the establishment of the Bank of England in the year 1694, the notes of that corporation superseded the goldsmiths’. The business of banking, too, became gradually separated from that of a goldsmith, though we learn from a speech delivered in Parliament, in the year 1746, that most of the London bankers were at that time members of the Goldsmiths’ Company.

2. I am not aware that we have any authentic details of the rise and progress of country banking in England. It is generally understood that very few country banks existed previous to the American war—that they rapidly increased after the termination of that war—that they received a severe check in the year 1793, when twenty-two became bankrupt, and that they increased with wonderful rapidity after the passing of the Bank Restriction Act. Since the year 1808, every bank that issues notes has been compelled to take out an annual licence‡—and since 1804, the notes have been subject to a stamp duty. This duty was increased in 1808, and again in 1815.§

In the year 1775, bankers were prohibited by Act of Parliament, to issue notes of a less amount than 20*s.* And in 1777, they were prohibited to issue notes of a less amount than 5*l.* But after the passing of the Bank Restriction Act in 1797, the last restriction was removed, and the country banks commenced issuing notes of 1*l.* and 2*l.* And in 1822, the permission to issue such notes was continued until the expiration of the Bank Charter in 1833. But after the memorable panic of 1825, the government refused to issue any more stamps for notes under 5*l.*, and it was enacted that all such notes

* The “History and Principles of Banking,” p. 21.

† Brewer’s “Poetical Chronology.”

‡ See Table I.

§ See Table II.

already stamped should cease to be issued by the bankers after the year 1829.

The speculations that preceded the panic of 1825, were attributed by the government of the day, to a wild spirit of speculation fostered by the country banks. To guard against the recurrence of similar evils, not only were notes under 5*l.* abolished, but two other measures were introduced. Banks of issue consisting of more than six partners, were permitted to be formed at greater distance than sixty-five miles from London; and the Bank of England was induced to open branches in the provinces.

3. And here it will be proper to notice a peculiarity in the county of Lancaster, and particularly in Manchester and Liverpool. In these places there were no country notes, and but a small proportion of Bank of England notes. The circulation consisted mainly of bills of exchange, which passed from hand to hand like bank notes, having the endorsement of all the parties through whose hands they had passed. In Liverpool large notes were required to pay the duties at the Custom House; and in Manchester small notes were required to pay wages. These were obtained from the Bank of England in London: but the transactions between manufacturers and dealers were transacted by bills of exchange, and as these bills were all made payable in London, bank notes were not required in Manchester or Liverpool, even for the payment of these bills.

4. The measures adopted by the legislature in the year 1826, led to the establishment of branches of the Bank of England in Manchester and Liverpool. From this period the circulation of bills of exchange declined, and was superseded by Bank of England notes. This was accelerated by the circumstance that the joint-stock banks formed in these places did not issue their own notes, but those of the Bank of England. This establishment had offered to discount for the joint-stock banks at one per cent. less than they charged to the public, and the joint-stock banks thought it more for their interest to obtain the notes of the Bank of England on these terms, than to issue notes of their own. The circulation of the country now consisted of notes of the branches of the Bank of England, notes of the joint-stock banks, and notes of the private bankers; and as many of the weak private banks had ceased to exist, and as others had merged into joint-stock banks, and as all notes under 5*l.* were abolished, it was supposed that the country had now obtained the advantage of a secure circulation.

5. But in the latter end of the year 1836 another panic arrived, when it was discovered that the country circulation was again at fault. But the charge now was, not that it was unsafe, but that it was excessive; and this charge of having issued to excess was more especially directed against the joint-stock banks.

Here it may be observed that in the panic of 1825, the amount of country notes in circulation was unknown. No returns at that time were made to the government, and the amount of notes in circulation could only be calculated, and that very imperfectly, from the number of stamps, of different denominations, issued from the Stamp Office.* But in the year 1833, the Chancellor of the Exchequer

* See Tables III. and IV.

(Lord Althorp) obtained an Act (3 & 4 William IV. c. 83), which required all banks issuing promissory notes, to make returns to the Stamp Office of the average amounts of notes in circulation in the quarters ending the first day of January, April, July, and October, in each year. The quarterly average was to be formed from the amount in circulation at the end of each week. These quarterly returns were afterwards published in the *London Gazette*.*

From these returns it was evident that the country circulation had increased by the beginning of the year 1836,† and as a general spirit of speculation prevailed at the same time, it was inferred that the country circulation was the cause of this speculation; and as by the end of the year the speculations had ended in panic, the country circulation was the cause of this panic.

6. Another panic occurred at the end of the year 1839; and here again, blame was cast on the country notes. But the complaint now was not that the country circulation was unsafe or excessive, but that it was ill-regulated. An opinion had been adopted by some distinguished Political Economists that the country circulation, as well as that of the Bank of England, ought to correspond at all times with the amount of gold in the Bank of England. It is true that the circulation of the Bank of England did not fluctuate in exact accordance with this amount of gold. But the country circulation did not correspond even with that of the Bank of England. And as the fluctuations in the country circulation did not correspond with the fluctuations either of the gold of the Bank of England or with the notes of the Bank of England, it was assumed that the country circulation was ill-regulated; and being ill-regulated it was assumed to be the cause, or at least one cause, of the panic that occurred at the end of the year 1839.

To examine into the truth of these opinions, a Committee of the House of Commons was appointed in the year 1840, to consider the state of the law with reference to Banks of Issue. The Committee examined witnesses during the sessions of 1840 and 1841; but the only practical result was that an Act was passed requiring weekly returns of their circulation from every bank of issue.‡

7. Before proceeding farther it may be fair to state the replies which the country bankers at various times gave to these severe accusations.

In reply to the charge that the currency was unsafe, from the number of failures which occurred among the country banks of issue; they state in their memorial to Earl Grey, in the year 1833, "the number of London bankers that have failed, is believed to be relatively greater, and the amount of their debts relatively larger, than that of country banks."

In reply to the charge that they had by an excessive issue of their notes promoted speculation, they state:—

"All experience shows that great fluctuations have originated in the speculations of influential merchants, and never originated in the channels to which the issues of country bankers are confined; their source is in great mercantile cities, and they are promoted by the

* See Table V.

† See Table V.

‡ 4 & 5 Victoria, cap. 50.

issues of the Bank of England. That this is the invariable course which fluctuations resulting in excess and derangement take, is proved by the evidence of Mr. Ward and others, before the Bank Charter Committee, and is fully explained by the speeches of the King's Ministers in the year 1826. The debts of a few speculative merchants who failed in a single year in the town of Liverpool, where country bankers' notes never circulated, amounted to between seven and eight millions sterling, and their bills were either lodged in the Bank of England for loans, or were current in all parts of the country, stimulating circulation and promoting excess."

In reply to the charge that they had turned the foreign exchanges against this country, they reply:—

"Your memorialists are prepared to prove that the issues of country bankers have less tendency to promote fluctuations in the country than those of the Bank of England; and that their effect in throwing the exchanges against the country is comparatively insignificant. The slightest attention to facts would indicate the truth of these positions. It has been established by parliamentary evidence that the issues of country bankers fluctuated much less between the years 1817 and 1826 than those of the Bank of England; and it is indisputable that adverse exchanges, which endanger the Bank, always succeed great importations of foreign produce, and that they never can be occasioned by large exportations of domestic productions. Now it is notorious that the circulation of country bankers acts almost exclusively in promoting these productions: and that, when it is in an extended state, the direct and proper influence even of an alleged excess of that circulation, would be to provide the means of paying for the importations of foreign produce without causing so great an export of gold as to derange and endanger the monetary system of the country."

In reply to the charge that they had not governed their issues of notes by the foreign exchanges; they reply that such a system is not applicable to the nature of a local circulation:—

"Then, with respect to miners and manufacturers, any system which would bring them into immediate contact with the operation of the bank for regulating the foreign exchanges without that protection and defence from those convulsive changes which the local circulations afford, would be a system pregnant with indescribable hazard."*

8. Such was the state of the currency question when the late Sir Robert Peel came into office in the year 1841. The Charter of the Bank of England was subject to renewal in the year 1844, and in that year was passed an Act of Parliament "to regulate the issue of bank notes, and for giving to the Governor and Company of the Bank of England certain privileges for a limited period."†

The charges against the country circulation had been, that it was unsafe, excessive, and ill-regulated. The act of 1844 dealt chiefly with the second of these accusations.

According to the provisions of this act, no new bank of issue was permitted to be established in the United Kingdom, and the maximum

* See "The History and Principles of Banking," section on Country Bankers.

† 7 & 8 Victoria, cap. 32.

amount of notes which each existing bank of issue in England might issue upon an average of four weeks, should, after the 10th October, 1844, be the average amount of the notes in circulation during the twelve weeks ending the 27th April, 1844: that returns should be made to Government of the average amount of notes in circulation during each week, and if, upon an average of four weeks, the amount in circulation exceeded the authorized amount, the bank should be subject to a penalty equal to the amount of that excess. That if any existing bank, not having more than six partners, should increase the number of partners to more than six, it should lose the privilege of issue. That if any two banks should unite, so as to increase their number beyond six, they shall lose the right of issue. And if any banker shall become bankrupt, or cease to carry on the business of a banker, or cease to issue notes, it shall not be lawful for such banker at any time thereafter to issue any such notes.

The charge of being unsafe the Act did not meddle with, except so far as limiting the issues of each bank, and prohibiting any new bank of issue, may be regarded as elements of safety. But the Act of 1844 left the country circulation still unregulated by the amount of gold in the Bank of England. In the month of October, 1844, when the Act came into operation, the amount of gold in the Bank of England was 12,149,367*l*. On the 23rd of October, 1847, the amount of gold was 6,745,354*l*., but the law required no corresponding reduction in the amount of the country circulation. On the 10th of July, 1852, the gold had advanced to 21,845,390*l*., but the law permitted the country circulation no corresponding expansion. It does not, therefore, appear to have been the object of the Act, that the country bankers should regulate their issues by the amount of gold in the Bank of England,

9. The maximum was the average of the twelve weeks ending April, 27, 1844, but there seems to be no reason why this period should have been chosen. Sir Robert Peel originally proposed that the maximum should be the average of the previous two years. The private bankers asked for the average of the previous five years. The joint-stock banks asked for the *maximum* of the two years, contending, that if an average were made a maximum, the circulation would be still farther reduced. Sir Robert Peel ultimately determined on the average of the twelve weeks previous to the announcement of the measures to Parliament: the respective amounts are as follows:—

	Private Banks.	Joint-Stock Banks.
	£	£
Average of the two years....	4,916,494	3,061,562
Average of the five years....	5,761,792	3,485,329
Maximum of the two years	5,295,239	3,752,867
Average of the twelve weeks as ultimately cer- tified	5,153,407	3,495,446

The Private Banks were 205, and the Joint-Stock Banks 72.

The following are the average amounts of the country circulation during the previous five years:—

	£		£
1839.....	11,715,527	1842.....	8,249,052
1840.....	10,457,057	1843.....	7,667,916
1841.....	9,671,643		

This decline was attributed by the country banks to the dulness of trade, the low price of corn, and other temporary causes. But, doubtless, there were also other causes of a more permanent description. Some country banks had withdrawn their circulation, and issued the notes of the Bank of England, in consequence of advantageous proposals from that establishment. The increased facilities of travelling by railway, and other means, had tended to diminish the amount of notes in circulation, by causing them to be returned to the bankers more rapidly for payment. The uniform penny post commenced in January, 1840, and the registry of letters in July, 1841, and these enabled every country banker to send off to London every night the notes of other bankers he had received during the day, and thus the circulation was reduced. The practice of keeping banking accounts had also extended very much, so that instead of carrying notes in their pockets as formerly, people now lodged their notes with their banker, and made their payments by giving cheques on the bank.

From these causes it seems probable that the actual issue of the country banks would not have regained its former amount, even if the Act of 1844 had never been passed. The Act, however, had the necessary effect to render the actual circulation less than even the authorised issue. If you apply a maximum to a fluctuating circulation, the average amount must be less than the maximum. If in April, when the circulation is at its highest, the amount is less than the maximum, it will fall still lower in August. The maximum, too, was divided among many banks; each banker was obliged to keep below his share of the maximum, and when all these short-comings are added together they amount to a considerable sum. The penalty too, was so great—equal for every offence to the amount of the excess—that prudent bankers kept their circulation much below their maximum, in order to avoid the chance of incurring these heavy penalties.

10. There are several circumstances which show that in some instances the Act was felt to be a restriction. Attempts have been made to evade its provisions. The first occurred when Sir Charles Wood was Chancellor of the Exchequer, and he issued a circular letter to the country bankers stating, that, if such attempts should be continued he would introduce a more stringent measure. The second took place last year. When the Act was passed authorizing cheques to be drawn beyond fifteen miles upon a penny stamp, some banks issued on a penny stamp cheques which in form resembled bank-notes. The Stamp Act just passed prohibits this practice.

We have observed, too, in reference to individual banks, that in the returns, the fourth week is often less than the three preceding weeks. The average is taken every four weeks. If a banker finds that in the first three weeks he has exceeded his limit, he stops his own issues and sends to London for a supply of 5*l.* and 10*l.* Bank of England notes. Even this may not be sufficient, and then he sends his clerks round to all the neighbouring banks asking, "Have you

got any of our notes? If you have, we wish to pay them immediately, in order to keep down our average." Thus in some instances the country circulation has become in one sense a *regulated* currency. It is so regulated that in every fourth week the amount is less than in either of the three preceding weeks. Another circumstance which shows that the Act is felt to be a restriction is, that some joint-stock banks do not issue notes at all their branches. They issue to their authorized amount at a portion of their establishments, and at the rest they issue the notes of the Bank of England.

A further symptom of the inadequacy of the country circulation, is the increased circulation of the branches of the Bank of England. In 1836, when the country circulation was 11,700,000*l.*, the branch circulation was 3,500,000*l.* In the year 1846, the country circulation was only 7,700,000*l.*, and the branch circulation had increased to 6,500,000*l.**

11. At the same time we believe that much of the restriction that would otherwise have been felt, has been prevented by a cause to which we have already referred, the extension of the Deposit System of Banking. Formerly, to keep a banker was the privilege of a few; now it is the practice of the many. It is easy to perceive how this operates. If all the notes in a town are lodged with the bankers, and the depositors make their payments by cheques, notes are not required; the payment is made by a transfer from one account to another. If the two parties keep accounts with different bankers the effect is the same; for the country bankers make their exchanges with each other daily or weekly, and pay the difference by an order on their London agent. This order again is passed through the clearing, and the differences between the clearing bankers are paid by a draft on the bank of England. It is thus theoretically possible, that all the monetary transactions of a country may be settled by a system of transfers; and it is practically the fact, that a large proportion of them are so settled; and this amount has, of late years, largely increased, and is still increasing. We have no published accounts of the amount of deposits in the country banks, but we have of the joint-stock banks of London. The oldest of these banks has been established only twenty years, yet their united deposits in London are now above 22,000,000*l.*, while, during the same period, the private deposits of the Bank of England have increased from 5,000,000*l.* to 12,000,000*l.*† It cannot be supposed that all these deposits have been withdrawn from the private bankers. These large deposits are owing, I think, to the greater number of persons who now keep accounts with bankers, increased, no doubt, in recent years by the increasing wealth and prosperity of the country; and though I have not the returns necessary to prove it statistically, I believe that similar operations are taking place throughout the country; and that the prosperity of joint-stock banks has not in this respect caused any corresponding decline among the private banks.‡

12. I shall now proceed to notice those fluctuations that have

* See Table VI.

† See Table VII.

‡ The recent admission of the joint-stock banks into the clearing-house, and the practice of settling the clearance balances by cheques on the Bank of England, will still further economize the use of Bank notes.

taken place in the country circulation since the passing of the Act of 1844.

We have observed elsewhere,* “When our figures are chronological facts, new and highly important truths are sometimes ascertained by merely observing if any specific facts recur at certain periods. When we have ascertained any uniformity in the occurrence of certain events, we call that uniformity a *LAW*. Thus those uniformities that were found to occur in regard to the deaths at various ages, are now called the *Laws of Mortality*. A few years ago a Committee of the House of Commons published the average *monthly* circulation for several years of the notes that had been issued respectively by the Bank of England, the Country banks, the Banks of Scotland, and the Banks of Ireland. We have deduced from these returns what we term ‘*The Laws of the Currency*.’—

“We will take the monthly returns of the circulation for the period that is past, that is, from the end of September, 1833, to the end of 1843, and endeavour, by observing their various revolutions, to discover if they are governed by any fixed causes or principles—to ascertain if those principles are uniform in their operation; and if we should discover that the revolutions of the currency are regulated by any uniform principles, we shall call those principles the *Laws of the Currency*.

“We shall begin with that portion of the currency which consists of notes issued by the Bank of England. On looking over the monthly circulation of the Bank of England, given in the Table, No. 34, in the Appendix to the report of 1840, we observe, that the circulation of the months in which the public dividends are paid is higher than in the subsequent months. Thus, the average circulation of January is higher than that of February or March. The circulation of April is higher than that of May or June. The circulation of July is higher than that of August or September. And the circulation of October is higher than that of November or December. This, then, we may consider as one law of the circulation of the Bank of England—that it ebbs and flows four times in the year, in consequence of the payment of the quarterly dividends. This law does not apply to any other bank, as all the government dividends are paid by the Bank of England.’

“On inspecting the monthly returns of the country circulation for the last ten years, we find that the highest amount is in the month of April: thence it descends, and arrives at the lowest point by the end of August, which is the lowest point in the year. It gradually increases to November; a slight reaction takes place in December; but it then advances until it reaches the highest point in April. The general law is, that the country circulation always makes one circuit in the year—being at its lowest point in August, and advancing to December, and continuing to advance to its highest point in the month of April, and then again descending to its lowest point in August.’

“In Scotland the lowest point of the circulation is in March, and the highest in November. The advance, however, between these

* Logic for the Million. See the Section on the application of Logic to Statistics.

two points is not uniform—for the highest of the intervening months is May, after which there is a slight reaction; but it increases again until November, and falls off in December. The reason of the great increase in May and November is, that these are the seasons of making payments. The interest due on mortgages is then settled, annuities are then paid, the country people usually take the interest on their deposit receipts, and the servants receive their wages. There are frequently large sums transferred by way of mortgage. It is the custom of Scotland to settle all transactions, large as well as small, by bank notes—not by cheques on bankers, as in London. It is remarkable that these monthly variations occur uniformly every year, while the amount of the circulation in the corresponding months of different years undergoes comparatively very little change.’

“‘From what we have already said of the laws of the currency, those of our readers who are acquainted with Ireland, will be able to judge beforehand of the revolutions of her circulation. Being purely an agricultural country, the lowest points will of course be in August or September, immediately before the harvest, and the commencement of the cattle and bacon trade. Then it rises rapidly till it reaches its highest point in January, and then gradually declines. As an agricultural country, we should naturally expect that during the season of increase the circulation would expand most in the rural districts; and so we find that the circulation of the Bank of Ireland in Dublin, expands very moderately—that of her branches, which are located chiefly in large towns, expands more—while the circulation of the joint-stock banks, which are located in the agricultural districts, receives the largest increase. Again, the purchases and sales of agricultural produce are known to be in small amounts; and hence the notes of the smallest denomination receive the largest relative increase. The annual changes of the Irish circulation are governed chiefly by the produce of the harvest, and the prices of agricultural products. These are the laws of the circulation of Ireland.’”

13. The principles which these figures are supposed to have established, are thus stated in the evidence delivered before the Committee on Banks of Issue, in the year 1841 :—

“What is the general conclusion, which you propose to draw from the tables you have put in?”....“The general conclusion I would draw is, that the Bank of England is governed by certain laws which do not apply to the country circulation; that the country circulation of England is also governed by laws peculiar to itself; that the circulation of Ireland is also governed by laws peculiar to itself; that the circulation of Scotland is also governed by laws peculiar to itself; that those respective circulations are all governed by uniform laws, as is shown by their arriving at nearly the same point at the same period of the year; and, therefore, that you cannot introduce any system by which all those various circulations, governed by different laws, can be amalgamated into one system: that such a system would be at variance with itself, and would tend to destroy that beautiful system of country banking which now exists in this country—a system which has tended very much to the prosperity of this country, which, by receiving the surplus capital of different districts, and given out the capital for the encouragement of trade

calls forth all the natural resources of the country, and puts into motion the industry of the nation, and at the same time supplies a circulation which expands and contracts in each district according as it is required by the trade or agriculture of the district. Those expansions or contractions take place at different periods of the year in different districts; the circulation expands when the wants of trade require it, and when no longer wanted it again returns: and I think this beautiful system, in the language of the resolutions passed by the deputies from the joint-stock banks, 'has greatly promoted the agriculture, trade, mining, and general industry of the nation, and that equal advantages cannot be produced by one bank of issue.'"

14. Our first inquiry, then, shall be, Whether the fluctuations in the country circulation have been governed by the same laws since the passing of the Act of 1844 as they were before.

Upon inspection of Tables VI. and VII. in the Appendix, we find that the country circulation since 1844 has fluctuated in the same manner. We find, too, that the country circulation at these two periods (before and after 1844) conform to each other not only in their compliance with these laws, but also in their exceptions to these laws. The years 1836 and 1839 were years of panic, and as panics usually occur at the end of the year, the country circulation at the end of these years was less than in the preceding August. The year 1847 was also a year of panic, and here we find, too, that the circulation was lower in December than in August:—

	April.	August.	December.
	£	£	£
1836.....	12,403,634	11,658,494	11,228,594
1839.....	12,662,312	10,868,785	10,698,390
1847.....	8,024,168	7,133,525	5,939,007

In Table VII., we have stated the circulation of both the private and the joint-stock banks: and we find that each class of banks illustrates the same rule.—Both rise and fall at the same time, and are obviously regulated by similar laws.

To place these fluctuations in a more striking point of view, and at the same time to exhibit them in comparison with the fluctuations in the notes of the other banks, and with the amount of gold in the bank of England, we have constructed Table VIII., showing the change which occurred during the year 1845—the first year after the Act of 1844 came into operation. In this table we have represented the amount in circulation in the month of January—in each case by the number 100;—and the variations from this number in each subsequent month exhibit the monthly fluctuations in the amount of the circulation.

15. We will now proceed to a farther analysis of the returns before us. The country circulation is divided into two classes—that of the private banks and that of the joint-stock banks.—We will begin with the amounts which each class of banks is at present authorized to issue:—

	£
167 Private Banks are authorized to issue	4,616,609
65 Joint-Stock Banks are authorized to issue	3,325,857
Total authorized issue	7,942,666

The average issue of the private banks is 27,755*l.*; and of the joint-stock banks 51,167*l.* The highest issue of a private bank is 112,280*l.*; and of a joint-stock bank 442,371*l.* The lowest issue of a private bank is 3,201*l.*; and of a joint-stock bank 1,503*l.* In Tables XI. and XII. in the Appendix, we have given a further classification of the respective circulations of the private and joint-stock banks.

By the provisions of the Act, if any bank, not having more than six partners, should increase its partners to a greater number than six, it would lose the power of issue. So far as regards the amount of the circulation, this regulation seems unnecessary. Having fixed the maximum which each bank might issue, an increase in the number of its partners, though it might increase the safety of the notes to the public, could not increase the amount in circulation. If, indeed, the object were gradually to reduce or annihilate the country circulation, then this enactment might tend to answer its purpose. We stated in 1844, "Without casting any reflection on the private bankers, it may fairly be calculated that in the course of a few years their circulation will be less than at present. An unwillingness to publish the amount of their issues, a disposition to retire from business, misfortune, death, and other circumstances, may cause the withdrawal of the circulation of a country bank, and when once withdrawn it can never be restored."—Since that time 37 country private banks have ceased to issue; these are—

	£
11 Banks within the circle of 65 miles, whose fixed issue was	110,194
26 Banks without the circle " "	426,604
37 Total.	Total 536,798

Within the same period 7 joint-stock banks, having a fixed issue of 169,589*l.*, have ceased to issue. The original certified issue of 8,648,853*l.* has thus been reduced to the above sum of 7,942,666*l.*

The following is a list of the joint-stock banks and their respective issues:—

	£
Western District Banks at Devonport	18,125
Suffolk Joint-Stock Bank at Ipswich.....	7,449
Stockton and Durham Bank at Stockton	8,290
Leeds and West Riding Bank at Leeds.....	18,937
Leeds Commercial Bank at Leeds	13,914
Sheffield and Retford Bank at Sheffield	18,744
Union Bank at Newcastle-on-Tyne.....	84,130
Total.....	169,589

16. We will now classify the country circulation topographically. —Within a circle of sixty-five miles of London, a circle of 130 miles in diameter—there is no joint-stock bank of issue, nor any branch of the Bank of England. The issuing country banks may, therefore, be

divided into those within this circle and those without it. And we then find :—

	£
47 Private Banks, within the circle, are authorized to issue	1,303,318
120 Private Banks, without the circle, are authorized to issue	3,313,291
65 Joint-Stock Banks, without the circle, are authorized to issue....	3,325,857

Total Country Circulation..... 7,942,666

The average circulation of private banks within the circle is 27,730*l.*; and without the circle, 27,765*l.*

17. But we have referred only to the authorized circulation. We will now take a view of the actual circulation.—We will take that of the year 1853, and refer to the months of April, August, and December :—

	Authorized Circulation.	Actual Circulation.		
		April.	August.	December.
	£	£	£	£
47 Private Banks, } within the circle.... }	1,303,318	1,010,932	940,184	984,581
120 Private Banks, } without the circle }	3,313,291	2,852,361	2,708,110	2,849,172
65 Joint-Stock Banks	3,325,857	3,132,388	2,984,629	3,056,085

Taking the authorized circulation in each case to be represented by 100, the following will be the proportion of the actual circulation :—

		April.	August.	December.
47 Private Banks.....	100	77·5	72·1	75·5
120 Private Banks.....	100	86·8	80·8	84·5
65 Joint-Stock Banks	100	92·5	87·7	89·0

It will thus be seen, that, as compared with their respective authorized circulations, the actual circulation of the private banks is less than that of the joint-stock banks, and that of the private banks within the circle is less than that of the private banks without the circle. We cannot assign causes with so much certainty as we can state facts. Within the circle of sixty-five miles, the notes, which are all payable in London, may be sent there more rapidly for payment, and thus the circulation be reduced. Perchance, too, the non-issuing joint-stock banks may have withdrawn some of the business of the private bankers in that circle, and thus their circulation may have become still farther reduced, and that of the Bank of England increased. It is a mistake to suppose that a banker can keep out as many notes as he likes. If his rivals take from him any portion of his deposit or his discount business, his circulation necessarily becomes less. With regard to the private banks and the joint-stock banks beyond the circle, the difference may arise in part from the greater number of the private banks. Supposing, for illustration,

that each bank should be 1000*l.* below its authorized circulation, then the total deficiency of the private banks would be 120,000*l.*, while that of the joint-stock banks would be only 65,000*l.* Perhaps the joint-stock circulation, being issued at so many branches, may remain longer in circulation, or, perchance, the private bankers may purposely keep more within the prescribed limits in order to avoid the chance of incurring the penalties.

18. We will now classify the banks of issue according to the amounts they are respectively authorized to circulate, and we will begin with the private banks. These number 167 banks, who are authorized to issue 4,616,609*l.* But the larger portion are for comparatively small amounts. For 27 banks the authorized issue is under 10,000*l.* 52 banks have above 10,000*l.* and under 20,000*l.*; 31 banks are under 30,000*l.*; 20 banks are under 40,000*l.*; and 18 banks are under 50,000*l.* The total authorized circulation of these 148 banks is 3,241,476*l.* Of the remaining 19 banks, which have a circulation each of above 50,000*l.*, only two are above 100,000*l.* It is evident, therefore, that no very large portion of the country circulation is dependent on any one of these banks. It may be also stated that these 167 banks form, with their branches or agencies, 341 banking establishments.*

The joint-stock banks of issue are 65, which are authorized to issue to the extent of 3,325,857*l.* We have given a total of these banks in Table XII. It may be sufficient here to state that only five of these banks have an authorized circulation above 100,000*l.*; and these five banks have among them 147 branches.† It may also be added that every shareholder is answerable to the whole extent of his property for all the notes issued by the banks;—a circumstance which adds to the security of this portion of the country circulation.

19. We will now compare the circulation of the country banks with the country circulation of the Bank of England. We have been accustomed in former years to think of the Bank of England as a London bank, and to think of the country circulation as having the exclusive possession of the country. This is not now the case. In London the circulation consists exclusively of the notes of the Bank of England. Here there are 58 private and 23 joint-stock banking establishments that issue nothing else. Out of London, and within a circle of 65 miles, there are 100 private banking establishments that issue about a million of notes; but there are 23 private banking and 73 joint-stock banking establishments that issue only the notes of the Bank of England. Beyond 65 miles from London there is a circulation of above three millions issued by 241 private banking establishments; and about three millions more issued by 404 joint-stock banking establishments; but the 11 branches of the Bank of England, all located in this district, have probably a larger circulation than all these banks put together.‡ And besides this, a large portion of the notes issued by the parent establishment in London circulate in this district, or are found in the tills of its 647 banking establishments.

* See Table XI.

† Under the word "branches" we include sub-branches and agencies.

‡ See Table VI. We have no returns of the actual circulation of the branches of the Bank of England since the year 1847.

Banks in the same locality as a branch of the Bank of England, will keep in their tills some of the notes of the branch, because they can obtain gold for them without sending to London. But in places distant from the branches, the notes kept by bankers are those that have been issued in London.

And here we may notice a peculiarity of the branches of the Bank of England as banks of issue. They act to only a small extent as banks of deposit. In consequence of not allowing interest on deposits, they have not attracted any large amount from the country banks. From the returns laid before Parliament in the year 1848, it appears that the deposits in all the branch banks put together amounted to only about a million. Considering that the branches are established in large towns, and have been in existence for above twenty years, this amount is far from considerable. Hence the notes were chiefly issued by the branch in the way of discount. In London, the Bank of England is a bank of deposit as well as of discount; and when she restricts her discounts, her notes may be withdrawn by a withdrawal of her deposits. But the branches, having comparatively but small deposits, a restriction on their discounts immediately restricts the circulation of their notes. Hence, in seasons of pressure, a restriction of discounts by the Bank of England is felt severely in those places where she has branches, and in the year 1847 few places felt this more severely than Liverpool.* It may also happen that the Bank has to make advances to Government to pay the dividends; and to do this, it may be necessary to restrict the issues at the branches. Hence it would appear, that that portion of the country circulation which consists of Bank of England notes, may be more suddenly contracted than that which consists of notes of the country banks. In agricultural districts, or in places where there is but little demand for discount, the branches do not appear to have been profitable. Those at Exeter, Gloucester, and Norwich, have been withdrawn.

20. We will now compare the country circulation with the total circulation of the Bank of England. By the circulation of the Bank of England, I mean the amount of her notes which are in the hands of the public. In the year 1836, the Bank of England had above three-fifths of the circulation, and the country bankers about two-fifths. The average of the quarter ending June 1836, of the former was 17,184,000*l.*, and the latter 12,202,196*l.* From this time, the country circulation gradually declined, and in 1844, Sir Robert Peel fixed its maximum at 8,648,953*l.*, while that of the Bank of England was at the time 20,228,060*l.* Latterly, the country circulation has usually been about 7,000,000*l.*, while that of the Bank of England has varied from 20 to 23,000,000*l.*† The Bank of England has therefore at present three-fourths of the circulation, and the country banks one-fourth. The former, too, has the power of increase, while that of the latter is sure to decline. The act anticipated such a decline, and provides that if any of the then existing banks should cease to issue, the Bank of England might upon application receive from the Lords of the Treasury, permission to extend her issues upon securities to

* The circulation of the Liverpool branch was, on the 10th of April, 1847, 1,284,490*l.*; on the 24th of December, 1847, it was 973,360*l.*

† See Table XIV.

two-thirds of the sum withdrawn. Such a decline has taken place. Thirty-seven private banks, whose authorized issue amounted to 536,798*l.*, have ceased to issue; and seven joint-stock banks, whose authorized issue amounted to 169,589*l.*, have ceased to issue. This makes a total of 706,387*l.*, and consequently the Bank of England may upon application receive power to issue upon securities the additional sum of 470,925*l.*, making her total issue upon securities 14,470,925*l.* But as all the profit on the increased issue must go to the Government, the bank can have no inducement as a matter of profit to make the application.

This enactment about the profit on the increased issues has led to the question, whether it was the object of Sir Robert Peel that the issue of notes should ultimately be transferred exclusively to the Government. The gradual extinction of the country issues seems to be a step in that direction. When there is only one bank of issue in a country, it always becomes either directly or indirectly, an instrument of the Government. That he was desirous of only one bank of issue, seems pretty evident; that he wanted all the notes to be issued directly by the Government, is not so clear. The history of the currency, in almost every country, seems to show the evil of such a course. But we need not refer to history. We need only refer to the nation with whom we are at war. At present the Russian silver ruble is worth thirty-seven pence: the paper ruble is worth only ten pence halfpenny.

But the question naturally occurs,—If there be a falling off in the country circulation, why should the deficiency be supplied by the Bank of England? It seems to imply that if the same amount, or nearly the same amount, of notes are issued, it matters not at what place they are issued. But if a bank that has a circulation of 40,000*l.* stops payment, in a remote part of England, of what advantage is it to the traders or agriculturists of that district to know that the Bank of England may issue 30,000*l.* more notes in London? Why should not this increased power be given to the banks of the district? Is it desirable that the circulation of the Bank of England should be increased at the expense of the country circulation? Would it be for the advantage of the Bank of England herself, to be the only bank of issue in the country? Would not the Government in that case take the circulation, or at least the profit of the circulation, into its own hands? After the Government had enabled the Bank of England to exterminate her rivals, might not the same government place her ally under tribute? We all recollect the history of Rome.

It is obvious that an increased issue of notes by the Bank of England in London, will not meet the wants of a district in the country. The following extract from the evidence given before the Committee upon Banks of Issue, refers to the abolition of country notes, and it is applicable to the present case.

“What effects do you imagine would ensue when the measure had once been carried into effect?” “After the measure had once been carried into effect, the charges which the country bankers would be compelled to make upon that accommodation, which they would still have the power of affording, must be considerably increased.”

"Why?" "Because they would then get no profit upon the notes; at present they can afford to advance money at a low rate of interest when issued in their own notes, because of the profit upon those notes. If the country bankers had to bring the money from a distance and lend it to their customers, they must get a greater interest from their customers than they could get by employing it in London or elsewhere, and hence they must make, either in the form of interest, or in the form of commission, heavier charges than they made before."

"The profit on the circulation being thus reduced, there would be a further effect by the limitation of banking establishments; for some of these establishments are so small, and established at remote places, that they would scarcely pay the expense of conducting them, unless for the profits of the circulation; and yet the withdrawal of those establishments, though connected with no great profit to the bank, would be attended with very considerable loss and inconvenience to the inhabitants of those places, because those banks act as receivers of the surplus capital, and hence they are useful to persons who have money to place in those banks; they act as discounters and granters of loans, and hence they are useful to the productive industry of the country; they are also useful as banks of remittance, for the purpose of making payments from those places elsewhere, and hence they are useful to traders; and those useful purposes, as far as many small banks are concerned, would be altogether annihilated, if those establishments did not issue their own notes."

"In your opinion, the suppression of their circulation would render it necessary for them to charge a higher commission upon their operations, or a higher interest upon the loans which they make?" "With regard to those small establishments, I do not think any rate of commission could pay the expense; with regard to the larger establishments, you might make up for the deficiency of profit upon the circulation by an increased charge of commission; but with regard to small establishments, in remote places, the business is not sufficient, even with the charge of commission, to pay the expense without the profits of the circulation: annihilation of the circulation would lead to annihilation of the bank."

21. We will now compare the issuing banks with the non-issuing banks. By a non-issuing bank, I mean a bank that does not issue its own notes. I believe all the non-issuing banks issue exclusively the notes of the Bank of England; they do not reissue even the notes of other banks that they receive from their customers, but forward them immediately for payment. There is no bank of issue in London except the Bank of England. Within 65 miles of London there are 47 private banks of issue, making with their branches or agencies 100 banking establishments; within this circle there is no joint-stock bank of issue; beyond 65 miles from London there are 120 private banks of issue, making with their branches or agencies 241 banking establishments, and 65 issuing joint-stock banks, making with their branches and agencies 404 banking establishments; thus the total number of issuing banking establishments in England and Wales, is 745.

The non-issuing banking establishments in England and Wales are as follows:—

In London	Private banks.....	58	
„	Joint-stock establishments	23	
	Total in London	—	81
Within 65 miles....	Private banking establishments.....	23	
„	Joint-stock banking establishments	73	
		—	96
Beyond 65 miles....	Private banking establishments.....	92	
„	Joint-stock banking establishments	86	
		—	178
Total in England and Wales		355	
Add issuing banking establishments		745	
Total banking establishments		1,100*	

The number of places that have banking establishments within 65 miles is 123, and beyond that distance 443; so that, including London, there are in England and Wales 567 places which unitedly are blessed with the advantages of eleven hundred banking establishments.

In the circle within 65 miles of London most of the non-issuing joint-stock banking establishments are branches of a joint-stock bank, the head-office of which is in London. The head-office of the other is at Aylesbury.

Beyond the 65 miles the head-offices of the non-issuing joint-stock banks are generally in places where there are branches of the Bank of England. And here, for the use of those who are not familiar with the history of our subject, it may be proper to repeat, that, previous to the act of 1844, the Bank of England had arranged with several joint-stock and private banks to discount for them at one per cent. less than their usual rate of interest, provided they would issue none but Bank of England notes. The act of 1844 suppressed these agreements, and at the same time prohibited these banks resuming their issue. But as a compensation they were entitled to receive annually one per cent. upon the amount of Bank of England notes they should keep in circulation. But this compensation is to cease on the 1st August, 1856. A schedule attached to the act gives the names of these banks. The list contains four Liverpool joint-stock banks and two private banks. It is, we presume, in consequence of these agreements, that we find many of the non-issuing joint-stock banks are located in places where the Bank of England has branches. The following are the localities of the non-issuing joint-stock banks:— 6 in London, 5 in Liverpool, 3 in Manchester, 3 in Birmingham, 2 in Newcastle-on-Tyne. 1 in Ashton, Bolton, Stockport, Aylesbury, Bury, Plymouth, Swansea, Southampton, Portsmouth, Preston, and Sheffield, making a total of 30 banks. These banks have among them 148 branches—making a total of head-offices and branches of 178 banking establishments.

But here I must stop to notice the banks of Liverpool. Liverpool has no fewer than 12 banking establishments. These are, a branch of the Bank of England, four non-issuing private banks, one issuing joint-stock bank having branches throughout Wales but which does not issue notes in Liverpool, five non-issuing joint-stock banks, and a non-issuing branch of the Manchester and Liverpool District Bank,

* These are exclusive of the Bank of England and her eleven branches.

whose head-office is at Manchester. Out of London there is no place in England which has so many banks as Liverpool, nor is there any place which has so many joint-stock banks. Beside a branch of the Manchester and Liverpool District Bank, Liverpool has six independent joint-stock banks—Manchester has but three—Bristol has but two—Leeds has but two—Newcastle-on-Tyne has but two—but Liverpool can boast of six. None of the banks in Liverpool issue notes. We have already stated in part the cause of this. The trade of the Manchester and Liverpool district gave rise to a large number of bills. The bankers found it more to their interest to reissue the bills they had discounted than to issue their notes. Such was the case until the panic of 1825. The Bank of England then put down a branch at Liverpool, and soon afterwards joint-stock banks were established here. The branch bank offered, as we have stated, to discount for the joint-stock banks at one per cent. less than the rate charged to other parties, provided the banks would not issue notes nor reissue bills. This arrangement suited both parties; the branch bank got a circulation for its notes, the joint-stock banks (whose customers always wanted capital) got their bills discounted at a rate which compensated them for the want of issue either of notes or bills, while, at the same time, they obtained a sort of connexion with the Bank of England which at that time was of importance to young banking establishments. The Act of 1814 abolished these bargains between the branch banks and other banks; but at the same time they prohibited these banks from becoming banks of issue. Hence, all the banks of Liverpool have necessarily remained non-issuing banks, and they have shewn that banks may become wealthy and prosperous without having the power of issuing notes.

22. We will now compare the country circulation of England with the circulation of Scotland and Ireland.

On looking over the rows of figures denoting the circulation of England, Scotland, and Ireland, we may observe that since the Act of 1844 the laws of the currency as affecting their monthly variations are the same as before. In England the circulation is high in April and low in August. In Scotland it is low in March and high in November. In Ireland it is high in January and low in September. These have occurred with so much uniformity during the last ten years, as to show the operation of fixed causes.

At the same time the annual amount of the circulation shows the operation of local causes connected with the circumstances of the respective countries. In Ireland, in consequence of the famine, the circulation fell considerably below the authorized amount. The authorized issue formed upon the average of the year ending May 1, 1845, was 6,354,494*l*. In the year 1849 the actual issue was so low as 4,310,283*l*. In Scotland the authorized issue was 3,087,209*l*., but in consequence, it is presumed, of the briskness of trade, and the sums expended in constructing public works, the actual issue has usually been higher than the authorized amount.

This requires explanation. It may be asked, "How can a bank exceed its authorized issue? We reply, that not only are the laws of the currency different in Scotland and Ireland from what they are in England, but the laws of the State are also different. In England

should any bank exceed its authorized issue it would incur a penalty equal to the amount of the excess; but in Scotland and Ireland a bank may exceed its authorized issue, provided it has in its coffers an amount of gold equal to this excess.

But why this difference should exist is a question not easy to answer. It is said that Bank of England notes are not a legal tender in Scotland or Ireland, and hence they keep sovereigns. A very satisfactory reason as regards Scotland and Ireland. But why should not England have the power of issuing against Bank of England notes? It may be said that the English banks may issue Bank of England notes if they please, and thus reduce their own circulation. Precisely; and the banks of Ireland and Scotland may issue sovereigns if they please, and thus reduce their circulation. Why then should not the English banks be permitted to extend their circulation against Bank of England notes, in the same way as the banks of Scotland and of Ireland can extend their circulation against sovereigns? By this means the English bankers would be relieved from much anxiety in regard to the amounts of their notes in circulation, and rendered less liable to the heavy penalties they may now incur. It is true that in certain seasons the amount of country notes in circulation would be larger, and those of the Bank of England would be less. But then the notes of the Bank of England, instead of being in the hands of the public, would be in the tills of the bankers. This arrangement would place the country bankers of England upon the same footing as those of Scotland and Ireland.

But there is still another difference in the laws of 1844 and 1845, with reference to England, and to Scotland and Ireland. In Ireland and Scotland two banks of issue may unite, and the united bank have the united circulation. In England, if two banks of issue either of which has more than six partners should unite, the circulation of one or both of these banks would be lost. Unions of banks in either Ireland or Scotland are not very likely, nor perhaps desirable. The banks are large, have a respectable capital, and enjoy the public confidence. In England many banks are small and have small capitals. Union among them would be highly beneficial. Yet such is the waywardness of legislation, that the acts of 1844 and 1845 give facilities to unions in Ireland and Scotland, and restrict them in England.

There is another difference between England and Ireland. If any banks cease to issue, the Bank of England may extend her issue to two-thirds of the amount withdrawn. In a similar case, the Bank of Ireland may extend her issues to the whole amount thus withdrawn—Why this difference? we do not know.

23. But the most important circumstance in which the Banks of Scotland and Ireland differ from those of England, is in their power to issue notes under 5*l*. That portion of our currency in England which is under 5*l*. consists of gold and silver coin. And it may, under present circumstances, be worth while to inquire; Suppose we should have a protracted war, and be compelled to export our gold, either to subsidise foreign powers, or to maintain our fleets and armies abroad, what additional supply of gold could we obtain by means of issuing 1*l*. notes. I do not think we can get any certain

reply to this question; but there are some inquiries that may assist our reasonings on the subject. First, we may inquire, When the Bank of England issued small notes, what proportion did the notes under 5*l.* bear to the amount of the whole circulation? That establishment issued such notes from the year 1797 to the year 1821. We find that the highest proportion was in the years 1815 and 1816. On the last day of February in those years the circulation stood thus:—

	Notes under £5.	Notes of £5 and upward.	Total Circulation.
	£	£	£
1815.....	9,035,250	18,226,400	27,261,650
1816.....	9,001,400	18,012,220	27,013,620*

* See Table XV.

Here we find that the notes under 5*l.* were about half the amount of those of 5*l.* and upwards. This was in 1815, nearly forty years ago, and when the notes were issued only in London. Supposing, therefore, in round numbers that the Bank of England circulation is now 20,000,000*l.*, then in the same proportion she might maintain a circulation of 10,000,000*l.* of small notes. But we must remember that during the last forty years, the population, the trade, and the wealth of the nation have vastly increased. And, if pecuniary transactions were conducted in the same way, the notes in circulation must have increased in proportion. But, in consequence of the more general use of bills of exchange, the extension of banking accounts, the more frequent exchanges between country bankers, and the operations of the clearing-house in London, a smaller amount of bank notes is now necessary. All large transactions are now settled not by notes but by bills and cheques and transfers. But these banking facilities which diminish the demand for large notes, do not in the same proportion diminish the use of small notes. On the contrary, from the great increase in the labouring population, and the necessary increased extent of retail trade, the demand for small notes to pay wages and to settle small transactions, must, during the last forty years, have greatly increased. Seeing, then, that the demand for large notes has diminished, and the demand for small currency has increased, it seems reasonable to suppose that were the Bank of England now to issue small notes, the amount in circulation would bear a higher proportion to the large notes than was the case forty years ago.

I have already stated that we have no returns of the amount of the country circulation previous to the year 1833. But we have the number of notes stamped of different denominations, and we find that in years 1820 to 1825 the amount of notes stamped under 5*l.* varied from 37 to 50 per cent., making an average of 44 per cent. of the whole circulation.† This makes the small notes nearly equal in amount to the large ones. But here again it is probable that the small notes remained out longer than the large ones. A greater proportion of the large notes were probably in the banker's till, and a larger

† See Table XVI.

proportion of the small notes in the hands of the public. It seems probable, therefore, that the amount of small notes in active circulation was usually higher than the amount of large notes. And, if the Bank of England, whose issues were made only in London, and whose circulation was chiefly in London and Lancashire, maintained one-third of her circulation in small notes, it seems likely that the country banks, whose notes were issued in almost every town and village in the country, would maintain a much higher proportion than even one-half.

If we look to the present state of the circulation in Ireland and Scotland, we shall find that the small notes form the larger proportion, and the amount furnishes no confirmation of the doctrine that small notes diminish in wealthy countries. Scotland is a wealthier country than Ireland, yet has a larger proportion of small notes. And the north of Ireland is wealthier than the south, yet the banks of Belfast have a larger proportion of small notes than the banks of the south.*

From the former circulation of the Bank of England, the stamps issued to the country bankers, and the present circulation of Scotland and Ireland, we have then materials for forming an opinion as to the amount of small notes that might be maintained in circulation in England; and though we cannot fix the amount with that precision which the science of statistics requires, yet after putting the facts and reasonings together, we seem warranted in drawing the conclusion that the amount would not be less than thirty millions; and, consequently, we have the power, when necessary, of releasing from their present duties thirty millions of sovereigns, and employing them for national purposes elsewhere.

24. The Charter of the Bank of England will expire at the termination of twelve months' notice which may be given by the government, at any time after the first day of August next. It is not the object of this paper to examine any of the enactments of the Act of 1844 that have a reference to the Bank of England. But when the subject is brought under consideration, means should be employed to obtain some modification of those clauses that have a reference to the country banks. The country circulation should be preserved in its integrity—should be rendered capable of expansion, so as to meet the demands of a more numerous population, extended commerce, higher prices, and increased taxation—its issue should be allowed to be regulated by the demands of trade and agriculture in the respective districts in which the banks are established, and should be rendered as much as possible free from the operation of the foreign exchanges.

We find that in 1844, when the country circulation had greatly declined, we took the actual circulation of the then existing country notes, and made it a maximum circulation,—an arrangement which necessarily, from the fear of incurring penalties, reduced the amount of the actual circulation below the maximum. We apply this maximum to a circulation that fluctuated very much in different parts of the year. If, then, we keep below the maximum in April, we necessarily fall much lower in August. We divide this maximum

* See a paper on the Laws of the Currency in Ireland, read at Belfast in August, 1852, before the Statistical Section of the British Association, and published in the following Number of the "Statistical Journal." See also Tables XVII. and XVIII.

among 277 banks, and impose heavy penalties upon every one that shall exceed his portion of the maximum—a circumstance that tends to reduce still farther the actual circulation. No one is forbidden to reduce his issue as low as he pleases; and if he abandons it altogether, only two-thirds can be supplied, and that by permission of the government; and then only upon the application of a bank whose headquarters are in London, who is to get nothing by the operation, and whose issues are governed by laws which have been declared by the country bankers to be inapplicable to the operations of a local currency, and unsuitable to the requirements of domestic industry. This maximum must never be exceeded, while those banks that previously issued Bank of England notes, are not allowed to resume their own circulation, and no new bank of issue is allowed to be established. The result of this arrangement has been that an authorized issue in 1844 of 8,648,853*l.*, is now reduced to an authorised issue of 7,942,466*l.*, and that the actual circulation is generally below 7,000,000*l.*, and has been below 6,000,000*l.*; while every banker, in certain seasons of the year, has been compelled to watch the issue of his notes, lest he incur those enormous penalties which attend even the accidental violation of the Act.

In endeavouring to remove these inconveniences, we would be governed by a regard to the spirit of the Act of 1844, and attempt only to correct its practical defects. Among the modifications that may be suggested, perhaps the following may deserve a special consideration:—That the present maximum which applies to an average of four weeks should apply to an average of twelve months;—that all the banks which had formed agreements with the Bank of England, and whose compensation will cease in 1856, should then be allowed to circulate their own notes to the amount to which they had circulated Bank of England notes;—that the country circulation should not be less than the amount fixed by the Act of 1844, and that the deficiency of 706,387*l.*, which has since taken place, should be redistributed among the country banks, (whether at present issuing or non-issuing), in the district in which the deficiency has taken place;—that we adopt the enactments of Scotland and Ireland, by allowing the existing banks of issue to extend their issues beyond their fixed amount, provided they have gold, either at the head office or at any of the branches,* equal to the amount of the excess; and as Bank of England notes are a legal tender in England, and can be converted into gold upon demand, they might in this instance be placed upon an equality with gold;—that banks of issue not having more than six partners, be permitted to continue their fixed issue in the same locality, even should they increase their partners to a greater number than six; and that this regulation be made retrospective, so as to include all unions of banks of issue with other banks that have taken place since the year 1844; and further, that we adopt the law of Scotland and Ireland by allowing two or more banks of issue, whatever may be the number of their partners, to unite and to retain the

* The Act of 1845, in reference to Ireland, is imperfect in this respect. The Provincial Bank of Ireland, for instance, can issue notes against gold held in Dublin, Belfast, Limerick, and Cork, but not against gold held at any of the other branches. There seems to be no reason for this distinction.

united amount of issue of all the united banks. With reference to the issue of notes under 5*l.*, we think that is a question for the consideration of statesmen, and its adoption must depend upon the political circumstances of the country. As long as Australia can supply us with gold, sufficient to meet our foreign requirements, and to maintain our domestic currency, probably we had better remain as we are. At the same time it may be useful to know, that in case of necessity, we have here a magazine from which we may draw a large supply of the sinews of war.

APPENDIX.

TABLE I.

An Account of the Number of Licenses Issued to Country Bankers and the Number of Commissions of Bankruptcy Issued against Country Banks in each of the following Years.

Years.	Licenses.	Bankrupts.	Years.	Licenses.	Bankrupts.	Years.	Licenses.	Bankrupts.
1809....	702	4	1817....	752	3	1825....	797	37
1810....	782	20	1818....	765	3	1826....	809	43
1811....	789	4	1819....	787	13	1827....	668	8
1812....	825	17	1820....	769	4	1828....	672	3
1813....	922	8	1821....	781	10	1829....	677	3
1814....	940	27	1822....	776	9	1830....	671	14
1815....	916	25	1823....	779	9	1831....	641	....
1816....	831	37	1824....	788	10	1832....	636	....

TABLE II.

An Account of Stamp Duties Imposed on Country Notes in the Years 1804, 1808, and 1815.

				1804.	1808.	1815.
				<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Not exceeding £1	1 <i>s.</i>	.....		0 3	0 4	0 5
Exceeding £1	1 <i>s.</i>	not exceeding £2	2 <i>s.</i>	0 6	0 8	0 10
„	2	2	„	0 9	1 0	1 3
„	5	5	„	....	....	1 9
„	5	5	„	1 0	1 6	....
„	10	0	„	....	....	2 0
„	20	0	„	....	3 0	3 0
„	30	0	„	....	4 6	5 0
„	50	0	„	....	7 6	8 6
„	50	0	„	....	7 6	8 6

In the year 1828, after the establishment of branches of the Bank of England, country bankers were allowed, under the administration of the Duke of Wellington, to compound for the stamp duties on their notes and twenty-one-day bills on London, at the rate of seven shillings per cent. per annum—the rate then paid by the Bank of England. This was rendered virtually compulsorily by Lord Althorp's Act, passed in 1833. *By this arrangement the bankers paid only on the amount of notes in circulation. When the notes were stamped, a portion was always in the banker's till, and paid the same duty as those in the hands of the public.

TABLE III.

An Account of the Number of Country Bank Notes of all Denominations Stamped in each Year from 1820 to 1825, inclusive.

Years.	Not exceeding £1 1s. 5d.	Not exceeding £2 2s. 10d.	Not exceeding £5 5s. 1s. 8d.	Not exceeding £10 1s. 9d.	Not exceeding £20 2s.	Not exceeding £30 3s.	Not exceeding £50 5s.	Not exceeding £100 8s. 6d.
1820	1,683,824	22,181	203,673	49,280	7,250	....	71	1,060
1821	2,214,623	20,180	254,839	51,226	10,738	50	417	1,600
1822	1,888,959	11,700	267,213	65,032	13,756	100	206	1,060
1823	1,969,758	25,110	273,184	74,232	9,573	199	292	1,392
1824	2,501,849	21,500	442,112	131,196	22,189	14	528	1,861
1825	3,172,477	39,511	557,946	158,233	46,392	12	381	1,845

TABLE IV.

An Account of the Number of Country Bank Notes of all Denominations Stamped in each Year from 1820 to 1825, inclusive, and the Total Amount which these Stamps might circulate.

Year.	Number.	Total Amount.
		£
1820	1,967,339	3,503,901
1821	2,553,673	4,438,548
1822	2,248,026	4,293,164
1823	2,353,740	4,479,448
1824	3,121,249	6,724,069
1825	3,976,797	8,755,309

This table is designed to assist in forming an estimate of the amount of notes in circulation. It has been conjectured that the amount in circulation in any one year might be equal to the total amount stamped in the three preceding years. But this is a rough mode of calculation, and besides, we know not how many of these notes might remain in the bankers' tills.

TABLE V.

Quarterly Returns of Country Bank Notes from the Year 1834 to 1841, under Lord Althorp's Act, being the first Return ever made of the Amount of Country Notes in circulation.

Quarters ending			Private Banks.	Joint-Stock Banks.	Total.
			£	£	£
1834.	March	29th	8,733,400	1,458,427	10,191,827
	June	28th	8,875,795	1,642,887	10,518,682
	September	27th	8,370,423	1,783,689	10,154,112
	December	28th	8,537,655	2,122,173	10,659,828
1835.	March	28th	8,231,206	2,188,954	10,420,160
	June	27th	8,455,114	2,484,687	10,939,801
	September	26th	7,912,587	2,508,036	10,420,623
	December	26th	8,334,863	2,799,551	11,134,414
1836.	March	26th	8,353,894	3,094,025	11,447,919
	June	25th	8,614,132	3,588,064	12,202,196
	September	24th	7,764,824	3,969,121	11,733,945
	December	31st	7,753,500	4,258,197	12,011,697
1837.	March	31st	7,275,784	3,755,279	11,031,063
	June	30th	7,187,673	3,684,764	10,872,000
	September	30th	6,701,996	3,440,053	10,142,049
	December	30th	7,043,470	3,826,665	10,870,135
1838.	March	31st	7,005,472	3,921,039	10,926,039
	June	30th	7,383,247	4,362,256	11,745,503
	September	30th	7,083,811	4,281,151	11,364,962
	December	31st	7,599,942	4,625,546	12,225,488
1839.	March	30th	7,642,104	4,617,363	12,259,467
	June	30th	7,610,708	4,665,110	12,275,818
	September	30th	6,917,607	4,167,313	11,084,970
	December	31st	7,251,678	4,170,767	11,422,445
1840.	March	30th	6,893,012	3,940,232	10,833,244
	June	30th	6,973,613	4,138,618	11,112,231
	September	30th	6,356,801	3,630,285	9,981,286
	December	31st	6,575,838	3,798,155	10,373,993
1841.	March	30th	6,322,579	3,644,258	9,966,837
	June	30th	6,444,395	3,807,055	10,251,450

TABLE VI.

The Circulation of the Country Banks and of the Branches of the Bank of England from 1834 to 1847, inclusive; designed to show that the diminution of the Country Circulation has been attended by an increase of the Branch Circulation.

Years.	Country Circulation.	Branch Circulation.	Years.	Country Circulation.	Branch Circulation.
	£	£		£	£
1834.....	10,286,847	3,214,655	1841.....	9,635,196	4,216,929
1835.....	10,700,466	3,253,754	1842.....	8,249,052	4,886,618
1836.....	11,770,132	3,587,768	1843.....	7,667,924	5,437,396
1837.....	10,609,067	3,836,163	1844.....	8,311,447	6,516,984
1838.....	11,424,809	3,994,828	1845.....	7,642,194	7,127,604
1839.....	11,715,327	4,087,005	1846.....	7,740,425	6,773,636
1840.....	10,457,058	4,006,987	1847.....	7,352,928	6,527,740

TABLE VII.

The Amount of the Deposits in all the London Joint Stock Banks on the 30th June, 1854, and the Amount of the Public and Private Deposits in the Bank of England during the Years 1831 and 1853; designed to show that the number of persons who keep banking accounts in London must have greatly increased.

	Paid up Capital.	Reserved Fund.	Deposits.
	£	£	£
London and Westminster Bank....	1,000,000	125,307	6,892,470
London Joint-Stock Bank.....	600,000	153,549	5,837,900
Union Bank	422,900	50,000	7,031,477
Commercial Bank	300,000	64,012	1,265,903
Royal British Bank.....	50,000	12,416	900,390
London and County Bank (in- cluding country branches)	399,625	60,759	3,506,560
	2,772,525	466,043	25,434,700

	Bank of England.	Public Deposits.	Private Deposits.
		£	£
Average during the year 1831		3,948,102	5,201,370
Average during the year 1853		5,681,892	12,348,514

TABLE VIII.

A Statement of the Average Circulation of Country Notes in England and Wales for the Months of April, August, and December, in each Year from 1834 to 1843, both inclusive; designed to show that in these years the circulation was at the highest point in April and its lowest in August. The Average Annual Amount is shown in Tables V. and XIV.

Year.	April.	August.	December.
	£	£	£
1834.....	10,655,743	9,968,039	10,171,117
1835.....	11,023,301	10,395,039	10,834,826
1836.....	12,403,634	11,658,494	11,228,594
1837.....	11,120,363	9,935,701	10,357,651
1838.....	11,800,591	11,174,749	11,763,397
1839.....	12,662,312	10,868,785	10,698,390
1840.....	11,482,057	9,797,017	9,749,102
1841.....	10,795,870	9,059,553	8,520,386
1842.....	8,643,089	7,973,718	7,782,734
1843.....	8,101,454	7,114,788	8,057,674

TABLE IX.

A Statement of the Average Circulation of Country Notes in England and Wales for the Months of April, August, and December, in each Year from 1844 to 1853, both inclusive; designed to show that since the passing of the Act of 1844 the Country Circulation is governed by the same laws as before, and also that the Private Bank Circulation and the Joint-Stock Bank Circulation are governed by similar laws.

	1844.	1845.	1846.	1847.	1848.
	£	£	£	£	£
Private	5,295,239	4,680,648	4,736,786	4,722,349	3,853,001
Joint-Stock	3,752,867	3,306,245	3,301,184	3,301,819	2,764,790
Total in April	9,048,106	7,986,893	8,037,970	8,024,168	6,617,791
Private	4,338,569	4,358,253	4,407,765	4,179,178	3,482,809
Joint-Stock	3,158,290	3,142,142	3,111,536	2,954,347	2,471,710
Total in August....	7,496,859	7,500,395	7,519,301	7,133,525	5,954,519
Private	4,429,454	4,505,823	4,525,855	3,528,631	3,506,674
Joint-Stock	3,056,862	3,162,742	3,138,321	2,410,376	2,567,700
Total in December	7,486,316	7,668,565	7,664,176	5,939,007	6,074,374
	1849.	1850.	1851.	1852.	1853.
	£	£	£	£	£
Private	3,686,399	3,702,463	3,590,340	3,578,917	3,863,293
Joint-Stock	2,798,230	2,856,075	2,880,410	2,908,732	3,132,388
Total in April	6,484,629	6,558,538	6,470,750	6,487,649	6,995,681
Private	3,327,758	3,412,011	3,219,275	3,406,593	3,648,294
Joint-Stock	2,457,526	2,611,505	2,569,918	2,764,442	2,984,629
Total in August....	5,785,284	6,023,516	5,789,193	6,171,035	6,632,923
Private	3,527,246	3,450,811	3,370,976	3,647,713	3,833,753
Joint-Stock	2,601,152	2,685,543	2,678,391	2,914,201	3,056,085
Total in December	6,128,398	6,136,354	6,049,367	6,561,914	6,889,838

TABLE X.

A Comparative View of the Variations in the Circulation in the United Kingdom for every Four Weeks during the Year 1845, as compared with the Four Weeks ending January the 4th, 1845; designed to show the laws of the currency in regard to those Banks respectively, and also to show that none of them conformed to the variations in the amount of Bullion.

Four weeks ending	England.			Scotland.	Ireland.		Total.	Bullion in the Bank of England.
	*20,301,000	4,429,454	3,056,862	3,159,450 Chartered, Private, and Joint-Stock Banks.	3,917,800	3,065,751 Private and Joint- Stock Banks.		
	Bank of England.	Private Banks.	Joint Stock-Banks.		Bank of Ireland.			
								£
Jan. 4	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00
Feb. 1	106·50	103·34	102·65	97·18	101·69	101·63	104·14	99·73
March 1	103·84	99·59	101·08	94·52	101·88	102·12	102·00	103·70
„ 29	101·75	100·46	102·98	93·38	100·74	101·30	100·87	107·67
April 26	108·75	105·67	108·18	94·99	103·03	98·40	105·77	107·13
May 24	108·06	104·44	107·79	106·26	102·85	94·52	105·83	107·54
June 21	104·81	99·31	102·45	110·32	99·10	89·26	102·58	111·30
July 19	108·75	101·10	103·34	105·51	98·54	85·90	104·24	109·48
Aug. 16	111·16	100·00	102·22	104·55	96·40	84·24	104·86	105·72
Sept. 13	108·03	98·40	102·81	105·76	94·76	83·09	102·90	104·31
Oct. 11	107·83	102·93	108·34	108·51	99·74	95·46	105·51	100·81
Nov. 8	113·97	107·02	109·09	113·64	111·67	112·53	112·40	93·87
Dec. 6	108·44	103·16	105·40	120·41	112·44	108·03	108·96	89·84

* Amounts that are represented by 100·00 for January 4th, 1845.

TABLE XI.

Classification of the Issuing Private Banks: designed to show that a large proportion of these Banks issue individually to only a small amount—an element in the safety of the Circulation.

Number of Bank.	Classification.	Total Authorized Circulation.	Total Actual Circulation, December, 1853.	Average Circulation of each Bank.
	£	£	£	£
27	Under 10,000	179,304	135,685	5,025
52	„ 20,000	742,086	582,694	11,205
31	„ 30,000	781,791	627,673	20,247
20	„ 40,000	702,053	597,483	29,874
18	„ 50,000	836,242	719,705	39,983
7	„ 60,000	382,881	317,510	45,358
2	„ 70,000	137,908	105,485	52,742
4	„ 80,000	304,995	273,080	68,270
4	„ 90,000	336,727	285,017	71,254
2	Above 100,000	212,622	189,167	94,583

TABLE XII.

A Classification of the Issuing Joint-Stock Banks : designed to show that a large proportion of those Banks issue individually to only a small amount, and that those Five Banks that issue above £100,000 each, are large Banks, as is shown by the number of their Branches.

Number of Banks.	Number of Branches.	Authorized Issue under	Authorized Issue.	Actual Circulation last week in December, 1853.	Average Authorized Issue of each Bank.
		£	£	£	£
8	4	10,000	56,595	45,364	7,074
10	7	20,000	142,616	123,842	14,261
13	35	30,000	330,597	304,425	25,430
10	16	40,000	353,229	335,672	35,330
3	4	50,000	141,380	135,809	47,127
6	42	60,000	330,339	298,768	55,056
4	30	70,000	252,902	198,371	63,225
2	27	80,000	147,402	143,253	73,701
3	19	90,000	253,951	218,247	84,650
1	8	100,000	94,695	92,859	94,695
5	147	Above 100,000	1,222,151	1,139,760	244,430
65	339*		3,325,857	3,036,370	51,167

* Under the word "Branches," we include Sub-Branches and Agencies.

TABLE XIII.

The Joint-Stock Banks of Issue, and the number of their Branches respectively, with their respective authorized Circulation: designed to show that the average amount of their Circulation at each place of Issue is comparatively small.

Number of Banks.	Number of Branches.	Total Branches, including Head Office.	Authorized Issue.	Proportion to each Place of Issue.
17	None	17	312,313	18,371
12	1	24	283,168	11,799
7	2	21	302,668	14,413
8	3	32	298,414	9,325
2	4	10	87,359	8,736
3	5	18	91,006	5,056
1	6	7	86,060	12,294
4	8	36	373,475	10,374
2	9	20	169,377	8,469
2	10	22	120,769	5,489
1	11	12	83,535	6,761
1	12	13	122,532	9,426
2	15	32	119,672	3,740
1	19	20	76,162	3,808
1	23	24	356,976	14,874
1	95	96	442,371	4,608
65		404	3,325,857	8,232

TABLE XIV.

Average Amount of the Circulation of the Bank of England, and of the Private and Joint-Stock Banks, and of the Bullion in the Bank of England during the years 1842 to 1853, both inclusive, and also to the end of July, 1854 : designed to exhibit a comparison between them. (For the amount of the Circulation in previous years see Table V.)

Year.	Bank of England.	Private Banks.	Joint-Stock Banks.	Bullion.
	£	£	£	£
1842.....	18,440,153	5,297,499	3,008,295	8,101,307
1843.....	19,522,538	4,689,870	2,956,896	11,700,538
1844.....	21,215,000	4,786,881	3,388,509	15,333,923
1845.....	21,736,000	4,516,058	3,189,045	15,333,769
1846.....	21,248,230	4,554,549	3,170,828	14,680,461
1847.....	20,112,769	4,544,035	3,095,483	10,615,230
1848.....	19,071,857	3,658,867	2,604,422	13,765,642
1849.....	19,487,538	3,566,833	2,632,367	15,161,230
1850.....	20,624,615	3,584,236	2,739,212	16,597,153
1851.....	20,637,615	3,463,390	2,746,782	14,563,538
1852.....	23,159,000	3,556,836	2,862,096	20,586,076
1853.....	24,033,153	3,803,278	3,051,889	17,548,076
1854.....	22,464,857	3,836,231	3,065,502	14,474,285

TABLE XV.

The Total Circulation of the Bank of England, and the Circulation of Notes under £5, on the last day of February, in the years 1811 to 1821 inclusive, and the proportion per cent. between them : designed to assist in forming an opinion as to the amount of Notes under £5, which the Bank of England might now be able to keep in Circulation.

Year.	Total Circulation.	Circulation of Notes under £5.	Proportion per Cent.
	£	£	
1811.....	23,360,220	7,114,090	30.45
1812.....	23,408,320	7,457,030	31.85
1813.....	23,210,930	7,713,610	33.23
1814.....	24,801,080	8,345,540	33.65
1815.....	27,261,650	9,035,250	33.14
1816.....	27,013,620	9,001,400	33.32
1817.....	27,397,900	8,136,270	29.70
1818.....	27,770,970	7,400,680	26.65
1819.....	25,126,700	7,354,230	29.27
1820.....	23,484,110	6,689,130	28.49
1821.....	23,884,920	6,437,560	26.95

TABLE XVI.

The Total Amount of Country Bank Notes, and the Amount of those under £5 stamped in each year, from 1820 to 1825 inclusive, and the proportion per cent. between them: designed to assist in forming an opinion as to the amount of Notes under £5 which the Country Banks might now be able to keep in Circulation.

Year.	Total Amount Stamped.	Amount Stamped under £5.	Proportion per Cent.
	£	£	
1820.....	3,503,901	1,728,186	49.32
1821.....	4,438,548	2,254,983	50.80
1822.....	4,293,164	1,912,359	44.53
1823.....	4,479,448	2,019,978	45.09
1824.....	6,724,069	2,544,849	37.85
1825.....	8,755,309	3,251,499	37.13

TABLE XVII.

Average Circulation and Coin held by the Irish Banks during the Four Weeks ending Saturday the 24th day of December, 1853: designed to show the large proportion of Notes below £5 in circulation, and also that the Banks in the North of Ireland (the Belfast, Northern, and Ulster Banks,) issue a larger proportion of small Notes than those in the South (the National Bank of Ireland, Carrick, and Clonmel).

IRISH BANKS.

Name of Bank.	Authorized Circulation.	Average Circulation during Four Weeks ending as above			Average Amount of Gold and Silver Coin held during Four Weeks ending as above.
		£5 and upwards.	Under £5.	Total.	
1 Bank of Ireland	3,738,428	1,843,725	1,252,175	3,095,900	771,257
2 Provincial Bank of Ireland	927,667	336,207	639,211	975,418	233,719
3 Belfast Bank	281,611	58,311	444,936	503,247	285,428
4 Northern Bank	243,440	35,838	244,090	279,929	63,527
5 Ulster Bank	311,079	53,946	443,827	497,773	204,923
6 National Bank of Ireland	761,757	384,771	636,908	1,021,679	393,220
7 Carrick - on - Suir National Bank }	24,084	11,085	13,428	24,513	5,555
8 Clonmel National Bank	66,428	25,139	29,628	54,768	10,591
Totals	6,354,494	2,749,022	3,704,203	6,453,227	1,968,220
Totals of—					
3 Northern Banks, } Nos. 3, 4, & 5	836,130	148,095	1,132,853	1,280,949	553,878
3 Southern Banks, } Nos. 6, 7, & 8	852,269	420,995	679,964	1,100,960	409,366

TABLE XVIII.

Average Circulation and Coin held by the Scotch Banks during the Four Weeks ending Saturday the 24th day of December, 1853; designed to show the large proportion of Notes under £5, and also that the proportion is higher in Scotland than in Ireland.

Name of Bank.	Authorized Circulation.	Average Circulation during Four Weeks ending as above.			Average Amount of Gold and Silver Coin held during Four Weeks ending as above.
		£5 and upwards.	Under £5.	Total.	
					£
Bank of Scotland	300,485	136,834	279,730	416,564	171,661
Royal Bank of Scot- land	183,000	71,531	127,175	198,706	51,477
British Linen Com- pany	438,024	188,707	335,431	524,138	146,791
Commercial Bank of Scotland	374,880	169,908	356,839	526,747	239,730
National Bank of Scotland	297,024	111,602	240,404	352,007	107,624
Union Bank of Scot- land and Banking Company in Aber- deen	415,690	168,840	359,147	527,987	162,267
Edinburgh and Glas- gow Bank	136,657	64,772	103,511	168,283	53,798
Aberdeen Town and County Bank.....	70,133	35,529	75,405	110,934	46,881
North Scotland Banking Company}	154,319	87,096	116,372	203,468	60,387
Dundee Banking Company	33,451	9,316	28,631	37,947	6,688
Eastern Bank of Scotland	53,636	16,557	27,054	43,611	11,245
Western Bank of Scotland	337,938	125,996	361,320	487,316	234,389
Clydesdale Banking Company	104,028	42,497	105,511	148,009	73,501
City of Glasgow Bank	72,921	69,008	99,289	168,297	105,901
Caledonian Banking Company	53,434	24,861	53,922	78,783	34,805
Perth Banking Com- pany	38,656	18,657	35,129	53,786	23,906
Central Bank of Scot- land	42,933	23,417	42,786	66,204	28,119
Totals	3,087,209	1,365,128	2,747,656	4,112,787	1,559,170

Suggestions for Improving the Present Mode of Keeping and Stating the National Accounts. By CHARLES JELLICOE, Esq., F.S.S.

[Read before the Statistical Section of the British Association, for the Advancement of Science, at Liverpool, 21st September, 1854.]

THE object of all account keeping is two-fold: viz., the determination of the status or condition of affairs at given epochs, and the record of the transactions which lead to changes in such condition from epoch to epoch.

A little consideration will show that, in the absence of information on either of those heads, our knowledge, in any given case, must be necessarily very imperfect, and that to arrive at a complete comprehension, it is indispensable that we should have full particulars as to both.

It is, therefore, somewhat remarkable that many of the great institutions of this country limit themselves to the publication of particulars comprised under one or the other only of the heads in question. Thus, the Bank of England and most of the joint stock banks give an account of their status at certain epochs, but leave the public quite in the dark as to the transactions which led to it. Many of the great assurance companies, on the other hand, do just the reverse of this; that is to say, they omit all mention of their status, and give merely the transactions which have intervened since the last account rendered to their constituents. But strange as these instances may appear, they are of little importance when contrasted with the singular and momentous irregularity prevailing in this respect in the Government departments. From the time that the accounts of the country were first made public, to the present day, no attempt has ever been made, so far as I am aware, to exhibit the actual state of its affairs at any given epoch; nor does it appear to be in the power of any functionary of the Government to say whether, when the liabilities and assets of the country are brought into comparison, it is on the whole in a solvent condition, or otherwise.

To some this may seem a question of small importance; they will perhaps consider that it is sufficient to know what the income of the country is, and how far it is adequate to meet its expenditure, and they are satisfied to measure its prosperity by the amount of the surplus of the one over the other.

But it may be shown that this is often a very delusive test, and that the omission of such an annual statement of assets and liabilities as that I am contending for is productive of many very serious evils; thus, to mention one or two only, the money expended in the purchase of national property, being blended with the ordinary expenses of the nation, is quite lost sight of with the year's accounts, and hence the property itself becomes equally lost sight of, and the check upon its due preservation or productiveness gone. Had moneys thus expended been always carried, as they ought to have been, to such heads as "crown lands," "public buildings," "dockyards," "arsenals," "military stores," "ships of war," "naval stores," &c., the annual accounts of the country would now exhibit a complete and unerring schedule of all the accumulated purchases made out of the public purse, and any neglect or improper alienation of them would thus scarcely fail to become apparent.

Another evil arising from the present system is, that the actual expenditure of the country often appears to be greater than it really is, and the surplus consequently less than it ought to be, and an unnecessary fluctuation in the annual expenses and resources is thereby introduced. But the more weighty ill consequence is, that there is no check upon the due bringing to account of all the revenues arising from such properties as may have been purchased; for since these last are never necessarily brought forward in succeeding annual statements, any revenues arising from them may easily be overlooked.

What is here contended for is nothing more than that which every merchant finds it essential to do in his own case, that he may be enabled to compare the state of affairs at one epoch with that existing at another, and thus be enabled to judge of the progress or retrogression of them.

It may be said that schedules of the national properties are kept in the proper departments of the State; but this is not sufficient to ensure the correct registration of them; nor is there any plan of doing so equal to that which a regular system of account-keeping can supply.

In the returns annually submitted to Parliament an account should be given, beginning with the balance for or against the country at the commencement of the year; it should then show the income and expenditure during the year, and terminate with the balance at the expiration of it. This balance should then correspond (and this is a very important point, since the correctness of the whole in a great measure depends upon it) with the difference between the assets and liabilities of the nation at the date of the account, and these assets and liabilities should of course be properly detailed. The following will serve to show the operation of such a system applied to the national affairs.

We will suppose the balance on the 5th of July, 1853, to be against the country to the extent of 659,000,000*l.* (and nothing can show more forcibly the defects of the existing system than that we are obliged to suppose it); the usual annual statement briefly detailed will then appear as follows:—

Dr.			INCOME.			OUTGO.			Cr.		
1854.						1853.					
July 5.			Schedule.	£		July 5.			Schedule.	£	
Customs	<i>a</i>	...		18,503,838		Balance at this date		659,000,000			
Excise	<i>b</i>	...		13,302,263		1854.					
Stamps	<i>c</i>	...		6,525,423		July 5.					
Taxes.....	<i>d</i>	...		3,167,145		Interest and manage- }	<i>i</i>	...	27,530,881		
Property Tax.....	<i>e</i>	...		6,024,244		ment of Funded Debt }					
Post-office.....	<i>f</i>	...		1,232,000		Interest on Exchequer }	<i>k</i>	...	403,652		
Crown Lands.....	<i>g</i>	...		260,000		Bills					
Miscellaneous	<i>h</i>	...		132,895		Civil List, Courts of }	<i>l</i>	...	2,554,254		
Balance carried forward				660,644,703		Justice, &c.					
						Army, Navy, Ord- }	<i>m</i>	...	20,303,724		
						nance, &c.					
				£709,792,511							
1854.						1854.			£709,792,511		
July 5.						July 5.					
Balance at this date						Balance at this date			660,644,703		

We here perceive that the balance or surplus debt of the country, which, at the commencement of the year was 659,000,000*l.*, has, by the operations of the year, been increased to 660,644,703*l.*, and accordingly the public balance-sheet should exhibit that surplus, at the end of the year, of liabilities over assets. We may conceive it then to stand as follows:—

Drs.			LIABILITIES.	ASSETS.			Crs.
1854.				1854.			
July 5.			Schedule. £	July 5.			Sched. £
Unredeemed	Funded	} A	726,908,982	Value of Crown Lands....	E	20,000,000	
Debt, Great Britain				„ Public Build-ings	F	20,000,000	
Unredeemed	Funded	} B	38,975,000	„ Dockyards	G	25,000,000	
Debt, Ireland				„ Arsenals	H	25,000,000	
Exchequer Bills	C		17,742,500	„ Military Stores	I	5,500,000	
Miscellaneous liabilities*	D		7,054,025	„ Ships of War	K	5,500,000	
				„ Naval Stores	L	4,693,983	
				Cash at sundry Banks	M	8,841,821	
				Advances	N	8,500,000	
				Income in arrear	O	7,000,000	
				Balance, as above		660,644,703	
			<u>£790,680,507</u>				<u>£790,680,507</u>

We thus see, by the former of these two statements, that the country, at the end of the financial year, was indebted in a certain amount, and, by the latter statement, we are informed in what manner this “indebtedness” arises. The one, it will be observed, contains nothing but income, which is really available, and expenditure, which is absolute and unproductive. The other serves to indicate any increase or decrease in the liabilities on the one hand, or the assets on the other. Thus, if some of the public income had been devoted to the purchase of property, or to advances for works, it will appear under those heads, and augment the assets of the country accordingly; or, should it have been applied in redemption of the national debt, a corresponding decrease in the liabilities will be shown. As it is, we have no such statement presented as the second one of the above, and in such cases as those we have supposed, the first does duty for both. We have consequently the absolute expenditure falsely augmented, whilst the increase in the property of the country, or diminution in its liabilities, is in this way wholly put in the background.

A remarkable instance of this latter description will necessarily occur in the accounts of the country for the current year; as is well known, the rate of interest upon the stock designated as the $3\frac{1}{4}$ per cent. annuities, is this year reduced from $3\frac{1}{4}$ to 3 per cent., and the liability of the country in respect of it is therefore evidently also reduced by one-thirteenth part of the whole; that is to say, that what

* The amounts here given are merely approximative; in the absence of any estimate of the value of the public property, accuracy in other respects would be useless.

The account of Income should give the gross receipts, and the expenses of collection, &c., would then appear *per contra*.

has been hitherto looked upon as a debt of about 248,000,000*l.*, is in a manner suddenly diminished by no less a sum than 19,000,000*l.*, or thereabouts, and yet not only does so important a fact not appear at all under the present system, but it would be positively impossible consistently to represent it.* In like manner the gradual diminution, from year to year, of the vast liability in respect of the terminable annuities certain, and the variation of that which exists on the score of the government life annuities, are neither known nor capable, in the existing state of things, of being systematically recorded.

In further support of these arguments, it may be stated that the introduction of the true system would almost enforce accuracy in all the details of the public finance. Of late years, and especially under the superintendence of the present accurately-informed and able Secretary of the Treasury, Mr. Wilson, these details are given fully and with great clearness,† but having little to connect them together, the greater portion form an “indigesta moles,” which will assume no shape without considerable labour, whilst any comparison to be derived from them between the actual state of affairs at one epoch and that at another is all but impracticable. The diligence and ability exercised in the preparation of these documents are thus in a great measure thrown away for want of proper arrangement and organization. But were the public accounts kept upon the system in question, statements such as those above given might be placed first in order in the usual return presented to Parliament, and each item in them have reference to a schedule in which such particulars as those now furnished by the return might be set forth. The two statements would thus, whilst they gave a complete and succinct view of the affairs of the country, form an index to every variety of detail respecting them—an index, it must be remembered, not of a merely arbitrary or factitious character, but one which, from its peculiar nature, must inevitably embrace every item of the public income and expenditure, and every particle, be it ever so minute, of the national property.

The determination of the actual worth of this property would no doubt in the first instance be attended with some difficulty. In time, however, simple methods would, we may reasonably suppose, be devised, by which such a determination might be arrived at with sufficient nearness to the truth for all practical purposes, and occasional revisions would ensure still greater accuracy. But it is especially to be borne in mind that were it not so, and were the approximations made from time to time to the value of the national property ever so loose, the great object in view would still be attained, and it would assuredly be found that the mere establishment of the proposed system would tend more than anything else to remedy ultimately not only existing evils but any disorders of a financial kind which for a time might seek to shelter themselves under it.

* With such an account as that on the preceding page this would immediately appear. Thus the funded debt would be 19,000,000*l.* less, and the balance against the country diminished by the like sum.

† See Parl. Return, Finance Accounts, No. 275.

Statistics of the United States of America.
By THOMAS ABERCROMBIE WELTON, Esq.

[Read before the Statistical Society, 19th June, 1854.]

HAVING for some time taken a great interest in statistical inquiries, I was lately induced to publish some details relative to the United States of America, which I imagine, though doubtless well known to those gentlemen who pay attention to such inquiries, to be not sufficiently so to the public at large.

It having been intimated to me that these figures, if thrown into another shape, might perhaps be acceptable to you, I have endeavoured to meet your views; at the same time, as far as my opportunities would admit, enlarging and improving the matter.

The sources from whence I have mainly derived my information are the supplements to the tables of revenue, population, commerce, &c., printed by government. Something I have also gleaned from the Companions to the British Almanack; but a comparatively small and unimportant part. The areas, populations, &c., of states are taken from the last American census. Most of the data refer to the census of 1840; but a parallel series of calculations, founded on that of 1850, is appended to this paper.

The gradual concentration of the commerce of that part of the east coast north of Charleston, into New York and Boston, is a striking fact which will not have escaped your notice.

I do not agree with those who expect the present rate of increase to be fully maintained, which would give about 100 millions of inhabitants at the close of this century. I would rather estimate the probable population at 65 or 70 millions at most, at that time. But it is my impression that the states of New York, New Jersey, and those comprised in New England, will reach a very high degree of civilization long before the extremities of the United States territory are fully peopled; that they will establish manufactures, compared to which those which they at present possess are but trifles, and rival us in nearly every market in the world. For this reason, I think the American statistics should be studied by us more than those of any other nation.

As regards the institution of slavery, it is sufficiently obvious with what a mental blight it is attended; and that, making every allowance for the enervating influence of climate, it has much impaired the energies of the Whites among whom it exists.

As I have taken considerable pains to secure accuracy, I hope that the present will, at least, be as free from error as any similar compilation. If I have in many cases repeated facts already well known, it is because I wish to make my paper as complete as possible, even at the risk of being thought tedious.

I commence with a table of the population and area of the several States.

States.	Area Square Miles.	1790.		1840.	
		Population.	Slaves.	Population.	Slaves.
Maine	35,000	96,540	....	501,793	....
New Hampshire	8,030	141,899	158	284,574	1
Vermont	8,000	85,416	17	291,948	....
Massachusetts	7,250	378,717	....	737,699	....
Rhode Island	1,200	69,110	952	108,830	5
Connecticut	4,750	238,141	2,759	309,978	17
New York	46,000	340,120	21,324	2,428,921	4
New Jersey	6,851	184,139	11,423	373,306	674
Pennsylvania	47,000	434,373	3,737	1,724,033	64
Ohio	39,964	....	....	1,519,467	3
Indiana	33,809	....	....	685,866	3
Illinois	55,409	....	....	476,183	331
Michigan	56,243	....	....	212,267	....
Wisconsin	53,924	....	....	30,945	11
Iowa	50,914	....	....	43,112	16
15 Free States....	454,344	1,968,455	40,370	9,728,922	1,129
Delaware	2,120	59,096	8,887	78,085	2,605
Maryland and district of Columbia	11,050	319,728	103,036	513,731	94,431
Virginia	61,352	748,308	293,427	1,239,797	448,987
Kentucky	37,680	73,077	11,830	779,828	182,258
Tennessee	44,000	35,791	3,417	829,210	183,059
North Carolina	45,500	393,751	100,572	753,419	245,817
South Carolina	28,000	249,073	107,094	594,398	327,038
Georgia	58,000	82,548	29,264	691,392	280,944
Florida	59,268	....	....	54,477	25,717
Alabama	50,722	....	....	590,756	253,532
Mississippi	47,151	....	....	375,651	195,211
Louisiana	41,346	....	....	352,411	168,452
Arkansas	52,498	....	....	97,574	19,935
Missouri	65,037	....	....	383,702	58,240
14 Slave States....	603,424	1,961,372	657,527	7,334,431	2,486,226
Totals	1,057,768	3,929,827	697,897	17,063,353	2,487,355

The district of Columbia, being a small town district, governed by the central power, is in these estimates added to the state of Maryland, from which most of it was originally ceded. It contained 43,712 inhabitants in 1840. All the following estimates, unless it is otherwise stated, refer to the census of 1840.

Increase of Population between 1830 and 1840—

Average of the states 32.6 per cent.

Free states, 4 above, 9 under, the average.

Slave states, 7 above, 7 under, the average.

Two of the free states were not constituted in 1830; therefore, their rates of increase during this period are not known. They were, however, undoubtedly over the average.

Free.—Vermont	4.0 per cent.	Slave.—North Carolina....	2.1 per cent.
Connecticut	4.1 "	Delaware	2.2 "
New Hampshire....	5.7 "	Virginia	2.3 "
Rhode Island	12.0 "	South Carolina ...	2.3 "
New Jersey	16.4 "	Maryland	5.5 "
Massachusetts	20.9 "	Kentucky	13.4 "
Maine	25.6 "	Tennessee	21.6 "
New York	27.0 "	Georgia	33.8 "
Pennsylvania	27.8 "	Florida	56.9 "
Ohio	62.0 "	Louisiana	63.5 "
Indiana	99.9 "	Alabama	90.9 "
Illinois	202.4 "	Missouri	173.2 "
Michigan	570.9 "	Mississippi	175.0 "
		Arkansas	221.1 "

The slow rate of increase of the old slave states, which extends over 150,000 square miles, is very remarkable.

Average of the free states 38.5 per cent., and of the slave states 25.4.

Density of Population in 1840.—Number of inhabitants per square mile in the states 16.1.

Free.—Wisconsin	6 persq. mile	Slave.—Florida	9 per sq. mile
Iowa	8 "	Arkansas	1.9 "
Michigan	3.8 "	Missouri	5.9 "
Illinois	8.6 "	Mississippi	8.0 "
Maine	14.3 "	Louisiana	8.5 "
Indiana	20.3 "	Alabama	11.6 "
New Hampshire..	35.4 "	Georgia	11.9 "
Vermont	36.5 "	North Carolina	16.6 "
Pennsylvania	36.7 "	Tennessee	18.8 "
Ohio	38.0 "	Virginia	20.2 "
New York	52.8 "	Kentucky	20.7 "
New Jersey	54.5 "	South Carolina	21.2 "
Connecticut	65.3 "	Delaware	36.8 "
Rhode Island	90.7 "	Maryland	46.5 "
Massachusetts....	101.8 "		

Average of the free states 21.4, and of the slave states 12.2. Only one-tenth of Maine is cultivated.

Slavery.—Per-centage of slaves on the total population 14.6; and in each of the slave states as follows:—

Delaware	3.3 per cent.	Virginia	36.3 per cent.
Missouri	15.2 "	Georgia	40.7 "
Maryland	19.1 "	Alabama	42.9 "
Arkansas	20.5 "	Florida	47.2 "
Tennessee	22.1 "	Louisiana	47.8 "
Kentucky	23.4 "	Mississippi	52.1 "
North Carolina....	32.7 "	South Carolina ...	54.9 "

Average of the slave states 33.9.

The state of New Jersey contained 674, or 1 in 553, a higher proportion than in any other free state.

In 1790, there were 40,370 slaves in the present free states: in 1840 there were only 1,129. The number of slaves in Delaware, Maryland, and Virginia had recently (1840) diminished.

Employments.—Under this head were arranged, in the census of 1840, the occupations of 4,796,407 inhabitants. The proportions were as follows:—

77·4	per cent.	occupied in agriculture.
·3	"	mining.
16·5	"	manufactures and trade.
2·5	"	commerce
1·2	"	navigation of the ocean.
·7	"	ditto of canals, lakes, and rivers
1·4	"	learned professions, and engineers.

Total 100·0

Agriculture.—Average of the states 77·4 per cent.

Free.—Rhode Island	40·0 per cent.	Slave.—Maryland	68·9 per cent.
Massachusetts	41·2 "	Delaware	74·9 "
Pennsylvania	60·0 "	Louisiana	80·6 "
Connecticut	61·5 "	Virginia	82·0 "
New Jersey	62·6 "	Florida	83·4 "
New York	66·2 "	Missouri	83·9 "
Wisconsin	66·3 "	Kentucky	86·6 "
Maine	73·2 "	Tennessee	91·0 "
Ohio	76·2 "	North Carolina	92·2 "
New Hampshire	78·0 "	South Carolina	93·2 "
Iowa	79·7 "	Alabama	93·6 "
Vermont	81·8 "	Arkansas	93·8 "
Indiana	84·7 "	Georgia	94·1 "
Illinois	84·8 "	Mississippi	95·2 "
Michigan	86·6 "		

Average of the free states 68·1; and of the slave states 88·2 per cent.

Mining is not carried on very extensively in the United States. The following states take the lead in this branch of industry:—

Free.—Pennsylvania 4,603 persons, or 1·3 per cent on those employed.

New York.... 1,898 " "·3 " "

Wisconsin.... 794 " 7·5 " "

Slave.—Virginia..... 1,995 " ·5 " "

Missouri 742 " ·7 " "

Average of the free states ·4 per cent., and of the slave states ·2 per cent., on the total employed.

Manufactures and Trade.—

Free.—Michigan	10·5 per cent.	Slave.—Mississippi	2·8 per cent.
Illinois	10·7 "	Georgia	3·6 "
Indiana	11·7 "	Alabama	3·8 "
Iowa	12·4 "	Arkansas	4·2 "
Vermont	14·7 "	South Carolina	4·9 "
Maine	15·7 "	North Carolina	6·1 "
Wisconsin	17·1 "	Tennessee	7·2 "
New Hampshire	18·3 "	Louisiana	7·7 "
Ohio	18·4 "	Florida	8·1 "
New York	25·1 "	Missouri	10·1 "
New Jersey	29·7 "	Kentucky	10·3 "
Connecticut	30·1 "	Virginia	14·0 "
Pennsylvania	30·7 "	Delaware	19·0 "
Massachusetts	40·0 "	Maryland	23·2 "
Rhode Island	50·9 "		

Average of the free states 23·7 per cent., and of the slave states 8·3.

Commerce.—

Free.—Michigan	1·1 per cent.	Slave.—North Carolina	·7 per cent.
New Hampshire	1·4 „	Arkansas	·7 „
Vermont	1·5 „	Tennessee	·9 „
Indiana	1·8 „	South Carolina	·9 „
Illinois	2·0 „	Mississippi	·9 „
Maine	2·1 „	Georgia	1·1 „
New Jersey	2·5 „	Alabama	1·2 „
Ohio	2·6 „	Kentucky	1·5 „
Iowa	2·7 „	Virginia	1·6 „
Connecticut	3·0 „	Delaware	2·2 „
Rhode Island	3·2 „	Missouri	2·3 „
Massachusetts	3·8 „	Florida	3·3 „
New York	4·1 „	Maryland	3·4 „
Pennsylvania	4·4 „	Louisiana	8·7 „
Wisconsin	4·5 „		

The free states have only one-third as much sea-coast as the slave states; yet they greatly surpass the latter, both in commerce and in navigation.

Average of the free states 3·1, and of the slave states 1·7 per cent.

Navigation of the Ocean.—The number of ocean states is 18—10 slave and 8 free, of which New Hampshire, New York, and Pennsylvania in the free states, and Mississippi and Alabama in the slave states, have very little coast. The per-centage on persons employed in the coast states was 1·7. A small number of persons belonging to this branch of navigation are also to be found in the inland parts.

Free.—New Hampshire	·5 per cent.	Slave.—Mississippi	·0 per cent.
Pennsylvania	·5 „	Alabama	·1 „
New York	·8 „	Georgia	·1 „
New Jersey	1·3 „	North Carolina	·1 „
Connecticut	2·9 „	South Carolina	·2 „
Rhode Island	4·2 „	Virginia	·2 „
Maine	7·2 „	Maryland	·8 „
Massachusetts	12·8 „	Louisiana	1·3 „
		Delaware	1·9 „
		Florida	3·0 „

Average of the coast states: free 3·0, slave, ·3 per cent.

Navigation of Canals, Lakes, and Rivers.—

Free.—Wisconsin	2·0 per cent.	Slave.—Maryland	1·6 per cent.
New Jersey	1·8 „	Missouri	1·6 „
New York	1·5 „	Delaware	1·1 „
Pennsylvania	1·2 „	Florida	·8 „
Ohio	·9 „	Virginia	·7 „
Iowa	·6 „	Louisiana	·7 „
Rhode Island	·5 „	Alabama	·4 „
Connecticut	·5 „	Kentucky	·4 „
Maine	·4 „	North Carolina	·2 „
Indiana	·4 „	South Carolina	·2 „
Illinois	·3 „	Georgia	·2 „
Michigan	·3 „	Tennessee	·1 „
New Hampshire	·2 „	Mississippi	·1 „
Vermont	·2 „	Arkansas	·1 „
Massachusetts	·2 „		

Average of the free states ·9, and of the slave states ·5 per cent.

The superiority of the free states in inland navigation is mainly owing to the number of canals they contain. Mr. Tanner's estimate for this year (1840) is as follows:—

Free States.....	3,316 miles
Slave do.	593 „

Total 3,909

The lake trade at this time (1840) had not attained any great importance, except in the state of New York, but has since increased immensely. Several towns engaged in it have sprung up, as the following list of lake-towns will show:—

	Population in 1840.	Population in 1850.
Buffalo (New York)	18,213	42,261
Rochester do.	20,191	36,403
Chicago (Illinois)	4,470	29,963
Detroit (Michigan).....	9,102	21,019
Milwaukee (Wisconsin).....	1,712	20,061
Cleveland (Ohio).....	6,071	17,034

Learned Professions and Engineers.—

Free.—Rhode Island	1.1 per cent.	Slave.—North Carolina ....	.4 per cent.
Indiana	1.3 „	Georgia .....	.6 „
Maine	1.4 „	South Carolina ....	.7 „
Michigan	1.4 „	Tennessee .....	.8 „
New Hampshire	1.6 „	Alabama .....	.8 „
Illinois	1.6 „	Delaware .....	.9 „
Ohio	1.6 „	Virginia	1.0 „
Vermont	1.7 „	Mississippi	1.0 „
Massachusetts	1.8 „	Louisiana	1.0 „
Connecticut	1.8 „	Kentucky	1.1 „
New Jersey	1.8 „	Arkansas	1.1 „
Pennsylvania.....	1.9 „	Missouri	1.3 „
New York.....	2.0 „	Florida	1.4 „
Wisconsin	2.5 „	Maryland	1.8 „
Iowa.....	2.8 „		

Average of the free states 1.8, and of the slave states .9 per cent.

Education.—Under this head were classified 2,493,900 persons, of whom—

16,233 attended universities or colleges.
164,159 attended academies and grammar schools.
1,845,244 attended primary and common schools.
468,264 were educated at the public charge.

Total 2,493,900

Or 17.1 per cent. on the free population, supposing no slaves were educated.

Universities, &c.—11 per cent. on the free population of the states attended these establishments.

This class of education is naturally very irregularly distributed, an important institution in one state being apt to draw students from the neighbouring ones. Louisiana, which had the largest pro-

portion of this kind of education, had the *least* of the lower descriptions.

Free.—Wisconsin	·00 per cent.	Slave.—Florida	·00 per cent.
Iowa	·00 "	Arkansas	·00 "
Maine	·05 "	Delaware	·03 "
Indiana	·05 "	North Carolina	·03 "
New York	·05 "	Alabama	·05 "
Illinois	·07 "	South Carolina	·06 "
Michigan	·07 "	Tennessee	·08 "
Vermont	·08 "	Virginia	·14 "
Massachusetts	·10 "	Georgia	·15 "
Ohio	·11 "	Missouri	·15 "
New Jersey	·12 "	Kentucky	·24 "
Pennsylvania	·12 "	Mississippi	·25 "
New Hampshire	·15 "	Maryland	·25 "
Connecticut	·27 "	Louisiana	·54 "
Rhode Island	·30 "		

Average of the free states ·09, and of the slave states ·15 per cent.

Academies and Grammar Schools.—1·1 per cent. on the free population attended these schools.

Free.—Iowa	·1 per cent.	Slave.—Arkansas	·4 per cent.
Wisconsin	·2 "	Missouri	·6 "
Michigan	·2 "	Kentucky	·8 "
Ohio	·3 "	Tennessee	·9 "
Illinois	·4 "	North Carolina	·9 "
Indiana	·4 "	Delaware	1·0 "
New Jersey	·8 "	Louisiana	1·1 "
Pennsylvania	·9 "	Maryland	1·3 "
New York	1·4 "	Virginia	1·4 "
Vermont	1·4 "	Mississippi	1·4 "
Connecticut	1·6 "	Alabama	1·5 "
Maine	1·7 "	South Carolina	1·6 "
New Hampshire	2·0 "	Georgia	1·9 "
Massachusetts	2·3 "	Florida	2·6 "
Rhode Island	3·4 "		

The free states under the average include all westward from New York state.

Average of the free states 1·1, and of the slave states 1·2 per cent.

Primary and Common Schools.—Per-centage for the United States 12·7 on the free population.

Free.—Iowa	3·5 per cent.	Slave.—Louisiana	1·9 per cent.
Wisconsin	6·3 "	North Carolina	2·9 "
Indiana	7·0 "	Florida	3·2 "
Illinois	7·3 "	Arkansas	3·4 "
Pennsylvania	10·4 "	Georgia	3·8 "
Michigan	14·0 "	Tennessee	3·9 "
New Jersey	14·1 "	Kentucky	4·1 "
Ohio	14·4 "	Maryland	4·3 "
Rhode Island	16·0 "	Virginia	4·5 "
New York	20·7 "	Mississippi	4·6 "
Connecticut	21·2 "	South Carolina	4·7 "
Massachusetts	21·7 "	Alabama	4·8 "
Vermont	28·4 "	Missouri	5·2 "
New Hampshire	29·4 "	Delaware	9·2 "
Maine	32·8 "		

This kind of education is evidently most largely developed in New England and the state of New York, the maximum being in Maine, while the minimum is in Louisiana, at the opposite corner of the United States.

Average of the free states 16·9, and of the slave states 4·2 per cent.

Scholars at Public Charge.—Per-centage on the free population 3·2.

Free.—Iowa	·0 per cent.	Slave.—Arkansas.....	·0 per cent.
Illinois.....	·3 "	Florida	·0 "
Michigan.....	·5 "	North Carolina.....	·0 "
Wisconsin	1·0 "	Mississippi	·1 "
Indiana	1·0 "	Kentucky	·1 "
New York	1·1 "	Missouri.....	·2 "
New Jersey.....	1·9 "	Georgia	·3 "
New Hampshire....	2·7 "	Louisiana	·6 "
Ohio	3·4 "	Alabama.....	1·0 "
Connecticut	3·5 "	Tennessee	1·1 "
Pennsylvania	4·3 "	Virginia	1·2 "
Vermont	5·0 "	South Carolina	1·3 "
Rhode Island	9·9 "	Maryland	1·7 "
Maine	12·0 "	Delaware	2·1 "
Massachusetts.....	21·5 "		

Average of the free states 4·4, and of the slave states ·7 per cent.

Total Scholars.—Per-centage on free population 17·1.

Free.—Iowa	3·6 per cent.	Slave.—Arkansas	3·8 per cent.
Wisconsin	7·5 "	North Carolina....	3·8 "
Illinois.....	8·1 "	Louisiana	4·1 "
Indiana	8·5 "	Kentucky	5·2 "
Michigan.....	14·8 "	Florida	5·8 "
Pennsylvania	15·7 "	Tennessee.....	6·0 "
New Jersey	16·9 "	Georgia.....	6·2 "
Ohio	18·2 "	Missouri	6·2 "
New York	23·3 "	Mississippi	6·4 "
Connecticut.....	26·6 "	Virginia	7·2 "
Rhode Island	29·6 "	Alabama	7·4 "
New Hampshire	34·3 "	Maryland	7·6 "
Vermont	34·9 "	South Carolina....	7·7 "
Massachusetts.....	45·6 "	Delaware	12·3 "
Maine	46·6 "		

Average of the free states 22·5, and of the slave states 6·2 per cent.

Ignorance.—It appears by the census for 1840 that 549,693 whites above 20 years of age out of the total number, 6,439,699, or 8·5 per cent., were unable to read or write.

I am disposed to consider the proportion of ignorance as a more certain test of the state of education among a people than that supplied by the statistics of school attendance, chiefly on the ground that, while one is a mean, the other is a result actually obtained.

Free.—Connecticut	3 per cent.	Slave.—Louisiana	6.2 per cent.
New Hampshire ....	.6 "	Maryland	7.5 "
Massachusetts.....	1.1 "	Florida	9.4 "
Maine	1.4 "	Mississippi	11.3 "
Vermont	1.6 "	Missouri	14.8 "
Michigan.....	2.3 "	Kentucky	16.5 "
Rhode Island	2.8 "	Alabama	17.3 "
New York	3.8 "	Delaware	17.5 "
New Jersey.....	3.8 "	Virginia	17.8 "
Pennsylvania	4.4 "	South Carolina....	18.4 "
Ohio	5.5 "	Georgia	19.1 "
Iowa	5.7 "	Arkansas	21.5 "
Wisconsin	10.0 "	Tennessee.....	23.5 "
Illinois	13.9 "	North Carolina....	27.0 "
Indiana	14.2 "		

Want of education and ignorance do not always go together in a constant ratio. Louisiana has 6.2 per cent. ignorance, 4.1 per cent. education, while Tennessee, with 6.0 per cent. education, has 23.5 per cent. ignorance. However, the rule is general, with a few exceptions, such as the above.

Average of the free states 4.6, and of the slave states 17.6 per cent.

The preceding details refer to 1840; but since then great progress has been made, as shown by the census of 1850, of which the following are a few particulars. They are, for the sake of comparison, for the states before enumerated, exclusive of the new territories of Texas, California, Oregon, New Mexico, Utah, and Minnesota, added since 1840.

The population of the free states has increased from 9,728,922 to 13,342,325, including, instead of 1,129 slaves, only 236 in New Jersey, described as "apprentices by the state's act to abolish slavery."

On the other hand, that of the slave states has now reached 9,452,064, including 3,145,890 slaves, instead of 7,334,431, including 2,486,226, as in 1840.

The above shows an increase of 3,613,403, or 37.1 per cent. in the population of the free states, and 2,117,633, or 28.9 per cent., in that of the slave states (30 per cent. on the free inhabitants, and 26½ on the slaves), the free states having, therefore, the advantage.

Free.—Vermont	7.6 per cent.	Slave.—South Carolina..	12.5 per cent.
New Hampshire..	11.7 "	Virginia	14.7 "
Maine	16.2 "	North Carolina..	15.3 "
Connecticut	19.6 "	Delaware	17.2 "
New York.....	27.5 "	Tennessee	20.9 "
Ohio	30.3 "	Maryland	23.6 "
New Jersey	31.1 "	Kentucky	26.0 "
Pennsylvania.....	34.1 "	Alabama	30.6 "
Massachusetts ..	34.8 "	Georgia	31.1 "
Rhode Island....	35.6 "	Louisiana	46.9 "
Indiana	44.1 "	Florida	60.5 "
Illinois	78.8 "	Mississippi.....	61.5 "
Michigan	87.3 "	Missouri.....	77.8 "
Iowa	345.8 "	Arkansas	115.1 "
Wisconsin	886.9 "		

Two important results may be gathered from the above table, as follows: 1st, Although the immigration between 1840-50 was quite

unprecedented, the rate of increase was little more than maintained, and would have retrograded, but for that extraordinary supply; 2nd, The increase of population in the fifteen oldest states during that interval was at a higher rate than during any similar period since 1810.

If the population of these fifteen old states goes on increasing at the same rate, they will be peopled as densely as England is now in about a century.

A very important movement, viz., the occupation of the shores of the great lakes, has very recently commenced, and has received a great development in the ten years under consideration.

In those slave states, the slow increase of which, in 1830-40, I have already noticed, a great augmentation has taken place in the rate, though it is still comparatively slow.

The density of population has now reached 21·5 per square mile in the 29 states which existed in 1840, being 29·4 in the free, and 15·7 in the slave states.

Free.—Iowa	3·8 per sq. mile	Slave.—Florida	1·5 per sq. mile
Wisconsin	5·7 "	Arkansas	4·0 "
Michigan	7·1 "	Missouri	10·5 "
Illinois	15·4 "	Louisiana	12·5 "
Maine	16·7 "	Mississippi	12·9 "
Indiana	29·2 "	Alabama	15·2 "
Vermont	39·3 "	Georgia	15·6 "
New Hampshire	39·6 "	North Carolina	19·1 "
Pennsylvania	49·2 "	Tennessee	22·8 "
Ohio	49·6 "	Virginia	23·2 "
New York	67·3 "	South Carolina	23·9 "
New Jersey	71·5 "	Kentucky	26·1 "
Connecticut	78·1 "	Delaware	43·2 "
Rhode Island....	123·0 "	Maryland	57·4 "
Massachusetts ..	137·2 "		

Slavery has diminished in intensity in Delaware, Maryland, Virginia, Kentucky, and Missouri, that is, in every slave state adjoining the free frontier. Per-centage for the entire states 13·8, and for the slave states 33·3.

Delaware	2·5 per cent.	North Carolina	33·2 per cent.
Missouri	12·8 "	Georgia	42·1 "
Maryland	14·8 "	Alabama	44·4 "
Kentucky	21·5 "	Florida	45·0 "
Arkansas	22·4 "	Louisiana	47·3 "
Tennessee	23·9 "	Mississippi	51·1 "
Virginia	33·2 "	South Carolina	57·6 "

From the foregoing analysis, founded on the census of 1840, it will be seen that, out of a given number of persons employed in the free states, there were twice as many employed in mining, nearly twice as many in commerce, four times as many in navigation, nearly three times as many in manufactures and trades, and twice as many in the learned professions, as in a similar number in the slave states:

That out of a given number of free persons, although a larger number frequent the universities and higher schools in the slave states than in the free, three and a half times as many were being educated in the latter as in the former.

That three and a half times as much ignorance existed among free whites above 20 years of age in the slave states as in the free.

That the free states were twice as densely peopled as, and increase more rapidly in population than, the slave states.

The comparison as to education is heightened by the consideration that a larger proportion of the population of the slave states is of a proper age for it than in the free states.

A more striking comparison still may be obtained by separating the two great divisions into five parts, so as to be able to compare the thorough and well-established states with each other, separating those which are still new or of a mixed nature.

For this purpose, I will call the New England states, New York, New Jersey, Pennsylvania, and Ohio, the east, or settled free states; and Indiana, Illinois, Michigan, Wisconsin, and Iowa, the west free states. Also Delaware and Maryland, which partake somewhat of the character of the free states, the northern slave states; and Missouri and Arkansas, the western. The rest will constitute the eastern, or settled slave states, none of which contain less than 21 per cent. of slaves.

Taking the eastern slave states as the standard, the following will be the comparative numbers in the other divisions:—

	To every 100 in East Slave Districts.			
	East Free.	West Free.	North Slave.	West Slave.
Out of a given number of persons employed, there were employed in				
Agriculture.....	73	94	78	96
Mining	203	282	136	300
Manufactures and trades	350	153	303	120
Commerce	227	120	213	133
Navigation of ocean	1,237	26	531	16
" of canals, &c.	277	103	426	397
Learned professions	225	187	212	162
All employments except } agriculture	331	150	287	134
Out of a given number of free persons there were being educated				
In universities, &c.	71	36	150	86
In academies, &c.	100	33	108	50
In primary schools	462	200	125	122
At public charge	729	100	243	14
In all	415	152	138	93
Out of a given number of free whites } above 20 there were, unable to read } or write	18	62	47	85
Rate of increase, 1830-40.....	125	723	22	811
" 1840-50.....	112	354	90	340
Density, 1840	306	44	339	31
" 1850	314	66	333	46
Per-centage of slaves, 1850 .....	....	....	36	41

Ignorance and the absence of manufactures appear to be the

surest signs of barbarism. The difference between the slave states and the free on those points is sufficiently obvious.

It will be seen by the following tables, which also illustrate several other subjects, that the business of the slave ports consists chiefly in exporting produce (cotton, tobacco, rice, and wood), and that their imports are comparatively small. The first five tables include the twenty-nine states only.

TABLE I.

1851. States.	Imports.	Exports.			Ships Built.	Ships	
	Total.	Domestic Produce.	Foreign Produce.	Total.		Entered.	Cleared.
	£	£	£	£	Tons.	Tons.	Tons.
New York	29,488,862	14,188,448	3,729,683	17,918,131	76,805	2,746,129	2,467,132
Louisiana	2,610,096	11,243,336	92,906	11,336,242	2,327	328,932	421,566
Massachusetts ..	6,815,693	2,053,654	519,822	2,573,476	41,324	661,574	626,800
Pennsylvania	2,951,825	1,062,910	52,931	1,115,841	28,623	159,636	140,174
Alabama	86,135	3,860,172	....	3,860,172	355	55,684	121,265
South Carolina ..	433,607	3,190,954	....	3,190,954	625	93,064	140,508
Maryland and } Dis. Columbia }	1,402,387	1,143,616	45,622	1,189,238	22,466	114,704	107,648
Georgia	150,322	1,908,100	231	1,908,331	2,369	47,096	69,709
Florida	19,791	820,814	55	820,869	276	25,225	29,303
Virginia	115,194	643,217	547	643,764	1,778	34,563	65,347
Maine	245,123	316,143	7,073	323,216	77,398	147,184	195,741
Vermont	144,014	158,690	63	158,753	561	128,013	121,848
Ohio	142,986	82,318	....	82,318	6,036	51,837	30,586
Connecticut	71,457	90,395	38	90,433	3,414	34,712	30,661
North Carolina ..	43,111	88,906	906	89,812	1,725	20,318	42,388
Missouri	129,592	....	....	....	2,066	....	....
Rhode Island	64,715	46,542	2,995	49,537	3,057	22,892	23,585
Other States	109,399	63,096	1,660	64,756	26,928	60,386	63,286
Free States	39,975,912	18,062,196	4,314,266	22,376,462	253,001	4,012,363	3,699,813
Slave States	5,048,397	22,899,115	140,266	23,039,381	45,132	719,586	997,734
Totals	45,024,309	40,961,311	4,454,532	45,415,843	298,133	4,731,949	4,697,547

The imports of Missouri state seem to be overland from Mexico.

TABLE II.

Year ending 30th September, 1828.

States.	Imports.	Exports.			Imports and Exports.	
	Total.	Domestic Produce.	Foreign Produce.	Total.	1828.	1851.
	£	£	£	£	£	£
New York	8,734,957	2,575,420	2,169,924	4,745,344	13,480,301	47,406,993
Massachusetts	3,139,676	853,339	1,027,033	1,880,372	5,020,048	9,389,169
Pennsylvania	2,684,252	649,167	611,558	1,260,725	3,944,977	4,067,666
Louisiana	1,295,392	2,117,363	371,679	2,489,042	3,784,434	13,946,338
Maryland and Dist. Columbia }	1,210,700	794,458	255,930	1,050,388	2,261,088	2,591,625
South Carolina....	258,760	1,355,952	8,780	1,364,732	1,623,492	3,624,561
Virginia	78,175	692,628	3,244	695,872	774,047	758,958
Georgia	64,306	646,755	....	646,755	711,061	2,058,653
Maine	259,752	209,092	3,307	212,399	472,151	568,339
Rhode Island	235,047	112,849	37,602	150,451	385,498	114,252
Alabama	35,814	244,737	1,629	246,366	282,180	3,946,307
Connecticut	101,078	102,901	5,754	108,655	209,733	161,890
North Carolina....	55,961	108,854	260	109,114	165,075	132,923
New Jersey	147,265	394	....	394	147,659	265
New Hampshire.	62,469	24,156	1,768	25,924	88,393	13,120
Vermont	36,987	49,919	...	49,919	86,906	302,767
Florida.....	35,060	12,567	....	12,567	47,627	840,660
Other States	3,896	5,630	494	6,124	10,020	515,666
Free States	15,402,199	4,577,236	3,856,947	8,434,183	23,836,382	62,352,374
Slave States.....	3,037,348	5,978,945	642,015	6,620,960	9,653,308	28,087,778
Totals	18,439,547	10,556,181	4,498,962	15,055,143	33,494,690	90,440,152

TABLE III.
Produce, &c., in 1850.

Divisions.	Land Improved.	Wool.	Hay.	Butter.	Cheese.	Wheat.
	Sq. Miles.	Tons.	Tons.	Tons.	Tons.	Qrs.
Free.—E.	67,499	14,482	10,706,775	93,284	43,803	5,768,514
W.	21,692	3,253	1,764,044	15,723	1,608	3,339,053
Total	89,191	17,735	12,470,819	109,007	45,411	9,107,567
Slave.—N.	5,218	237	177,203	2,346	3	622,354
N.E..	41,795	3,283	703,595	14,963	419	2,561,010
S.E....	31,551	1,249	116,464	7,603	54	332,623
W.	5,768	811	120,208	4,293	103	392,218
Totals	84,332	5,580	1,117,470	29,205	579	3,908,205
United States	173,523	23,315	13,588,289	138,212	45,990	13,015,772

Divisions.	Indian Corn.	Hemp.	Tobacco.	Cotton.	Sugar.	
					Maple.	Cane.
	Qrs.	Tons.	Tons.	Tons.	Tons.	Tons.
Free.—E.	14,465,822	2,057	5,764	....	10,894	....
W.	15,768,183	5,930	841	....	2,823	....
Total	30,234,005	7,987	6,605	....	13,717	....
Slave.—N.	1,757,351	79	9,471	....	21	....
N.E..	21,860,779	45,883	64,502	52,699	803	....
S.E....	13,741,435	72	764	367,530	....	139,119
W.	5,570,792	21,220	7,706	11,605	81	....
Totals	42,930,357	67,254	82,443	431,834	905	139,119
United States	73,164,362	75,241	89,048	431,834	14,622	139,119

The north and south-east divisions of the slave states, mentioned above, comprise respectively Virginia, North Carolina, Kentucky, Tennessee; and South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana, together forming what I formerly denominated the eastern division. The difference in climate, and the productions of nature, between these two subdivisions is very wide.

The quantity of rice grown in the United States in 1840, was 36,090 tons.

Bar and pig iron—

Imported, 765,000 tons in 1846 341,750 tons in 1851

Produced, 69,625 „ 413,000 „

Totals 834,625 „ 754,750 „

Anthracite coal raised in Pennsylvania in 1840, 867,045 tons; in 1850, 3,371,255 tons.

The following table shows that in 1840 the manufactures of cottons and woollens were nearly confined to the states north of Virginia and east of Ohio:—

TABLE IV.

States.	Value of Cotton Manufactures Produced.	Value of Woollen Manufactures Produced.	States.	Value of Cotton Manufactures Produced.	Value of Woollen Manufactures Produced.
	£	£		£	£
Massachusetts	3,448,630	1,475,604	Maine	202,166	85,909
Rhode Island	1,482,665	175,452	Vermont .....	....*	277,490
Pennsylvania	1,044,376	483,138	Maryland.....	239,704*
New York	758,383	736,943	Other States....	617,009	391,899
Connecticut	565,826	519,648			
New Hampshire ..	862,980	165,788			
New Jersey	434,605	....*	Totals.....	9,656,344	4,311,871

* I do not know these amounts, but they are included in "Other States."

TABLE V.

Chief Towns.—Free.	State.	Population in 1840.	Population in 1850.
New York	New York	348,943†	643,125
Philadelphia.....	Pennsylvania	228,391	408,762
Boston	Massachusetts	122,362	187,666
Cincinnati	Ohio	46,338	115,436
Pittsburgh	Pennsylvania	31,203	67,863
Albany	New York	33,721	50,763
Buffalo	Ditto	18,213	42,261
Providence	Rhode Island	23,171	41,512
Newark	New Jersey	17,290	38,894
Rochester.....	New York	20,191	36,403
Lowell	Massachusetts	20,796	33,383
Chicago	Illinois	4,470	29,963
Troy	New York	19,334	28,785
Syracuse	Ditto	6,500	22,271
Detroit.....	Michigan	9,102	21,019
Portland	Maine	15,218	20,815
Newhaven	Connecticut.....	12,960	20,345
Salem	Massachusetts	15,082	20,264
Milwaukee	Wisconsin	1,712	20,061
Columbus	Ohio.....	6,048	17,883
Utica	New York	12,782	17,565
Worcester	Massachusetts	7,497	17,367
Cleveland.....	Ohio.....	6,071	17,034
New Bedford	Massachusetts	12,087	16,443
Reading	Pennsylvania	8,400	15,748
<i>Chief Towns.</i>			
<i>Slave.</i>			
Baltimore.....	Maryland.....	102,313	169,054
New Orleans	Louisiana.....	102,193	119,461
St. Louis	Missouri	16,469	77,860
Louisville.....	Kentucky.....	21,210	43,196
Charleston	South Carolina...	29,261	42,985
Washington	Dist. of Columbia	23,334	40,001
Richmond	Virginia	20,153	27,482
Mobile	Alabama	12,672	20,513
Savannah.....	Georgia	11,214	16,060

† Exclusive of Williamsburgh.

TABLE VI.

Free States or Territories.	Population in 1850.	Slave States.	Population in 1850.
New York	3,097,394	Virginia	1,421,661
Pennsylvania	2,311,786	Tennessee	1,002,717
Ohio.....	1,980,329	Kentucky.....	982,405
Massachusetts	994,514	Georgia	906,185
Indiana	988,416	North Carolina ..	869,039
Illinois	851,170	Alabama	771,623
Maine	583,169	Missouri	682,044
New Jersey	489,555	South Carolina....	668,507
Michigan	397,654	Mississippi	606,526
Connecticut	370,792	Maryland.....	583,034
New Hampshire ..	317,976	Louisiana.....	517,762
Vermont	314,120	Texas	212,592
Wisconsin	305,391	Arkansas	209,897
Iowa.....	192,214	Delaware	91,532
Rhode Island	147,545	Florida.....	87,445
California.....	92,597	Columbia, Dist.	51,687
New Mexico.....	61,547		
Oregon	13,294	Total	9,664,656
Utah	11,380		
Minnesota	6,077		
Total	13,527,220		

TABLE VII.

Foreign Produce, &c.	Imports.		Exports.	
	1850.	1851.	1850.	1851.
<i>Provisions, &c.</i>	£	£	£	£
Wheat and wheat flour.....	437,998	337,210	223,925	366,100
Fish.—Mackarel, &c.	113,048	162,806	29,806	36,116
Other articles	61,869	96,393	2,332	1,969
Totals	612,915	596,409	256,063	404,185
<i>Beverages and Luxuries.</i>				
Sugar.....	1,574,699	2,884,571	125,923	75,566
Coffee.....	2,340,591	2,677,306	274,242	75,291
Tea.....	983,173	999,584	153,579	280,313
Molasses	602,122	772,413	21,889	9,220
Tobacco.....	364,238	643,609	33,933	45,432
Spirits, foreign	659,758	547,469	21,271	22,805
Wine	430,400	491,516	36,382	52,712
Fruit, dried	248,203	332,664	9,962	18,696
Spices.....	147,138	162,635	60,930	79,721
Other articles	60,388	78,136	27,437	16,031
Totals	7,410,710	9,589,903	765,548	675,787

TABLE VII.—Continued.

Foreign Produce, &c.	Imports.		Exports.	
	1850.	1851.	1850.	1851.
<i>Raw and Partially Manufactured Produce.</i>	£	£	£	£
Iron, pig, bar, sheet, scrap, &c., and steel	2,399,910	2,441,309	16,274	12,569
Hides, skins, and furs, raw and tanned, or dressed....	1,419,956	1,687,548	22,549	31,398
Wool and woollen yarn	385,902	843,757	78	1,670
Tin, plates and sheets, pig and bar	648,367	817,768	2,903	14,813
Linseed oil.....	176,807	340,169	271	2,782
Copper, pig, bar, old, and ore	283,905	332,702	61,827	22,812
Lead, pig, bar, sheet, and old	246,374	316,167	12,879	32,031
Indigo, woad, and dye-woods	288,378	268,188	127,687	116,861
Salt	257,747	218,310	2,014	4,706
Cotton, twist, yarn, &c., and raw	168,592	206,691	5,044	4,280
Hemp and tow	305,086	197,895	1,905	4,109
Rags	155,981	188,281	....	....
Wood.....	89,087	140,652	24,829	17,708
Saltpetre	148,696	123,717	2,188	5,139
Coal and coke	78,920	99,998	3,534	352
Other articles	482,564	508,399	13,966	20,185
Totals	7,536,272	8,731,551	297,948	291,415
<i>Woven Manufactures.</i>				
Silk manufactures	4,019,890	5,743,713	76,757	105,307
Cotton ditto	4,162,956	4,570,886	87,202	139,841
Woollen ditto	3,537,681	4,018,840	36,366	55,694
Linen ditto	1,733,458	1,878,928	27,445	24,208
Apparel, ready-made and second-hand	169,429	220,624	7,712	12,288
Hempen manufactures	70,113	118,461	18,030	8,994
Gunny cloth and bags	128,638	133,758	1,933	10,498
Other articles	118,033	110,559	2,780	1,220
Totals	13,940,198	16,795,769	258,225	358,050
<i>Metallic Manufactures.</i>				
Iron and steel manufactures	1,200,714	1,383,054	9,324	11,615
Watches, clocks, and parts thereof	354,734	603,252	953	6,114
Copper manufactures, in- cluding sheathing plates* Gold, silver, and jewellery manufactures	219,779	229,539	6,983	5,078
Fire arms	79,667	108,295	3,765	4,703
Other articles.....	241,765	226,412	4,916	4,354
Totals	2,201,462	2,685,645	32,332	43,355

* Part of this item is only rods and bolts, and should, if separable, go to the 3rd class.

TABLE VII.—Continued.

Foreign Produce, &c.	Imports.		Exports.	
	1850.	1851.	1850.	1851.
<i>Miscellaneous Manufactures</i>	£	£	£	£
China, earthenware, &c.	541,957	695,963	8,804	8,564
Leather manufactures, with } saddlery	278,538	410,275	2,806	3,142
Hats, bonnets, &c., of leg- } horn, straw, chip, &c.....	247,945	306,602	13,935	15,376
Glass manufactures.....	223,144	228,885	7,246	4,704
Paper do. and printed books	200,645	253,611	3,663	7,533
Chemical products.—Soda- } ash, chloride of lime, &c. }	198,242	241,919	1,126	1,546
Wood manufactures, (fur- } niture, &c.)	111,884	115,545	1,770	2,061
Buttons, not of metal	88,441	114,369	1,630	458
Sundries.....	215,136	225,041	29,831	25,075
Totals.....	2,105,932	2,652,210	70,811	68,459
Specie and bullion.....	964,332	1,136,165	1,140,899	2,375,661
Apparel, &c., of emigrants	31,602	22,614	....	....
Effects of citizens dying } abroad	1,046	785	....	....
Produce of United States } brought back	40,729	53,670	....	....
Unenumerated articles	2,266,954	2,782,138	293,134	261,456
Totals.....	3,304,663	3,995,372	1,434,033	2,637,117

Summary of Table VII.

Foreign Produce, &c.	Imported.		Re-exported.	
	1850.	1851.	1850.	1851.
	£	£	£	£
Provisions, &c.	612,915	596,409	256,063	404,185
Beverages and luxuries	7,410,710	9,589,903	765,548	675,787
Raw and partly manufac- } tured produce	7,536,272	8,731,551	297,948	291,415
Woven manufactures.....	13,940,193	16,795,769	258,225	358,050
Metallic ditto	2,201,462	2,685,645	32,332	43,355
Miscellaneous ditto	2,105,932	2,652,210	70,811	68,459
Sundries.....	3,304,663	3,995,372	1,434,033	2,637,117
Totals.....	37,112,152	45,046,859*	3,114,960	4,520,478†

* No returns of imports have been received from San Francisco (Cal.) in 1851.

† The added total is \$21,496,179, or 4,478,368*l.*, but the number stated in the return is \$21,698,293, or as above ;—difference 42,110*l.*

TABLE VIII.

Imports from United Kingdom. (British Return.)	British Produce, 1851. Declared Values.	Imports from United Kingdom, (British Return.)	British Produce, 1851. Declared Values.
	£		£
<i>Provisions, &c.</i>		<i>Woven Manufactures— continued.</i>	
Beef, pork, bacon, and hams	641	Silk manufactures	468,268
Butter and cheese	3,151	Woollen ditto	2,437,061
Fish.—Herrings	421	Apparel, slops, and haberdashery	667,065
<i>Beverages and Luxuries.</i>		<i>Metallic Manufactures.</i>	
Beer and ale	49,388	Arms and ammunition	66,951
Sugar, refined	1,549	Brass and copper ma- nufactures	265,635
<i>Raw and Partially Manufactured Produce.</i>		Hardwares and cutlery	1,080,487
Coals, culm, and cinders	47,832	Machinery and millwork	31,426
Cotton, twist, and yarn	4,307	Plate, plated ware, jew- ellery, and watches	115,119
Iron and steel, wrought and unwrought*	2,818,354	<i>Miscellaneous Manufactures.</i>	
Lead and shot*	105,354	Books printed	83,216
Linen yarn	13,939	Cordage	921
Salt	71,158	Earthenware	540,251
Tin, unwrought	4,659	Glass	39,785
Tin and pewter wares and tin plates*	644,453	Hats, beaver and felt... ..	1,714
Wool, sheep and lambs	28,666	Leather, wrought and unwrought, and sad- dlery	58,867
Woollen and worsted yarn	36,335	Painters' colours	49,180
<i>Woven Manufactures.</i>		Soap and candles	8,086
Cotton manufactures	1,972,988	Stationery	71,010
Linen ditto	1,531,411	All other articles	1,036,328
		Total†.....	14,362,976

* Part completely manufactured.

† Adds up 14,355,976—error 7,000.

TABLE IX.

Domestic Produce, &c.	Exports.		Domestic Produce, &c.	Exports.	
	1850.	1851.		1850.	1851.
<i>Animal Productions.</i>	<i>£</i>	<i>£</i>	<i>Woven Manufactures.</i>	<i>£</i>	<i>£</i>
Pork (pickled) bacon, } lard, live hogs }	1,572,976	910,003	Cotton manufac- } tures }	982,712	1,500,822
Beef, tallow, hides, } horned cattle }	334,502	352,075	Wearing apparel } Flax and hemp ma- } nufactures }	43,257	252,478
Butter and cheese }	253,222	234,302		2,453	1,671
Fish, dried and pickled }	95,165	100,346			
Other articles }	37,089	45,215			
Totals }	2,292,954	1,641,941	Totals }	1,028,422	1,754,971
<i>Vegetable Food.</i>			<i>Metallic Manufactures.</i>		
Wheat and wheat flour }	1,612,982	2,406,263	Iron, all manufac- } tures of, including } castings }	366,065	425,010
Indian corn and meal }	969,334	496,961	Other articles }	39,228	59,510
Rice }	548,241	452,276			
Other articles }	165,770	160,716	Totals }	405,293	484,520
Totals }	3,296,327	3,516,216	<i>Miscellaneous Manufactures.</i>		
<i>Beverages & Luxuries.</i>			Wood, all manufac- } tures of }	405,990	432,582
Tobacco, raw and } manufactured }	2,208,303	2,158,916	Soap and tallow can- } dles }	138,534	127,027
Other articles }	146,776	129,050	Leather — boots, } shoes, and saddlery } Other articles }	44,686	101,862
Totals }	2,355,079	2,287,966		388,004	484,956
<i>Raw & Partially Manu- factured Produce.</i>			Totals }	977,214	1,146,427
Cotton, raw }	14,996,795	23,399,024			
Wood }	541,045	546,647	Gold and silver coin } Articles not enume- } rated }	426,391	3,764,496
Naval stores.—Tar, } pitch, rosin, &c. }	238,066	221,634		947,631	1,033,385
Spermaceti oil }	164,332	217,701			
Skins and furs }	179,639	206,473	Totals }	1,374,022	4,797,881
Whale and other fish oil }	140,133	183,851			
Whalebone }	134,684	143,680			
Ashes, pot and pearl. }	119,348	135,227			
Other articles }	287,254	292,864			
Totals }	16,801,296	25,347,101			

Summary of Table IX.

Domestic Produce, &c.	Exports.		Domestic Produce, &c.	Exports.	
	1850.	1851.		1850.	1851.
	<i>£</i>	<i>£</i>		<i>£</i>	<i>£</i>
Animal productions.....	2,292,954	1,641,941	Woven manufactures	1,028,422	1,754,971
Vegetable food.....	3,296,327	3,516,216	Metallic ditto	405,293	481,520
Beverages and luxuries	2,355,079	2,287,966	Miscellaneous ditto	977,214	1,146,427
Raw and partially } manufactured pro- } duce }	16,801,296	25,347,101	Sundries }	1,374,022	4,797,881
			Totals.....	28,530,607	40,977,023

TABLE X.

Countries.	Imports, 1851.	Exports, 1851.
	£	£
United Kingdom.....	19,551,643	24,572,086
France	6,607,407	5,885,864
Cuba	3,551,444	1,359,192
British North America	1,394,400	2,503,109
Hanse Towns	2,085,076	1,259,885
Brazil	2,401,105	781,857
China	1,471,905	517,768
Holland and Belgium	922,987	1,051,496
Spain	450,536	1,157,206
British West Indies } and Guiana	218,351	968,291
Italy, with Sardinia } and Sicily	600,130	467,597
Chili.....	569,739	394,855
Argentine Republic...	680,288	223,910
British East Indies	695,070	143,414
New Granada	144,918	633,504
Hayti	393,743	378,602
Porto Rico	516,735	212,212
Venezuela	495,895	217,609
Mexico.....	375,995	329,538
Austria.....	152,248	520,097
Russia	290,163	335,769
Other countries	1,477,081	1,583,640
Totals.....	45,046,859	45,497,501

The enormous share of the commerce of the United States which England possesses will doubtless have a powerful effect in preserving friendly relations between the two countries in future, as no war could secure advantages capable of counterbalancing, for a moment, the ruinous effects of the stoppage of a trade so mutually advantageous. The imports from France are more than two-thirds "silk manufactures."

APPENDIX.

AT the request of the Society, I append an analysis of the industrial and educational statistics of the United States in the year 1850, which will be found to present the same peculiarities (though in a less degree, perhaps) as those of the previous census.

The census for 1850 classifies the employments of 5,371,876 free males over 15 years of age as follows:—

Commerce, trade, manufactures, mechanic arts } and mining	1,596,265
Agriculture	2,400,583
Labour not agricultural	993,620
Army	5,370
Sea and river navigation	116,341
Law, medicine, and divinity	94,515
Other pursuits requiring education.....	95,814
Government civil service	24,966
Domestic servants	22,243
Other occupations	22,159
Total	5,371,876

The table of occupations for 1840 included the free and slave population of both sexes and of all ages. That this precludes any comparison is manifest. The proportion employed in agriculture is in this last census less (as slaves are excluded) in the slave states; but the same alteration does not take place in the free states. The proportion in the free states employed in manufactures is diminished by the exclusion of women and children; but, there being few manufactures in the slave states, they are very much less affected. I may also notice that the number of male domestic servants above given must afford a very imperfect idea as to the extent of that class, women and boys being excluded.

It is to be expected, from what has been said, that the proportion of persons employed otherwise than in agriculture will be much nearer for the two great divisions than in the former table. But that the people of the free states, having to cultivate the land themselves, and having only the produce of their own industry to trade in, should still devote a larger relative number (exclusive of women and children) to manufactures, commerce, and trade than the free population of the slave states, who have, besides their own, the labour of three millions of slaves, is a sufficiently striking fact. The following tables will show that such is the case:—

Commerce, Trade, Manufactures, &c.—Per cent. on all occupations 29·72 for the union.

Free.—New Mexico	6·03	per cent.	Slave.—Arkansas.....	10·53	per cent.
Illinois	16·82	"	Tennessee	13·93	"
Indiana	18·22	"	North Carolina..	14·79	"
Vermont	18·50	"	Mississippi.....	16·05	"
Iowa	18·77	"	Alabama	16·55	"
Michigan	20·53	"	Georgia	16·81	"
Maine	23·51	"	Texas	17·10	"
Oregon	25·99	"	Florida	18·12	"
Wisconsin.....	26·27	"	Kentucky	19·15	"
Utah	26·41	"	South Carolina..	19·26	"
Ohio	26·88	"	Virginia	23·22	"
Minnesota	28·08	"	Missouri.....	23·48	"
New Hampshire..	29·51	"	Delaware	25·54	"
New York	35·20	"	Maryland and }	39·49	"
New Jersey	36·15	"	Dis. Columbia }		
Pennsylvania.....	39·22	"	Louisiana	42·61	"
Connecticut	39·84	"			
Rhode Island	48·32	"			
Massachusetts	49·44	"			
California	88·89	"			

Average for the free states 33·10, and for the slave states 21·39 per cent. It will be noticed that the numbers in New Mexico and California differ widely from all the rest; owing to causes easily perceptible, one being a country ceded by the Mexicans, and containing a small, indolent, and ignorant population, and the inhabitants of the other being absorbed in the search for gold, and consisting mainly of adult male adventurers.

Agriculture.—Per centage for the states 44·69.

Free.—California	2·65	per cent.	Slave.—Maryland	21·32	per cent.
Massachusetts	18·86	"	Louisiana	24·15	"
Rhode Island	19·51	"	Delaware	35·74	"
Minnesota	24·10	"	Florida	45·50	"
New Jersey	25·50	"	Virginia	47·76	"
Pennsylvania.....	30·49	"	Missouri.....	51·15	"
Connecticut	32·86	"	North Carolina..	58·82	"
New York.....	35·35	"	Texas	59·03	"
Oregon	43·99	"	Kentucky	60·19	"
New Mexico	45·52	"	South Carolina..	60·25	"
Maine	47·37	"	Mississippi.....	66·97	"
New Hampshire..	50·17	"	Georgia	67·64	"
Utah	50·43	"	Alabama.....	68·32	"
Ohio	50·94	"	Tennessee	70·72	"
Vermont	52·40	"	Arkansas	70·96	"
Wisconsin.....	52·44	"			
Michigan	60·39	"			
Illinois	65·52	"			
Indiana	65·63	"			
Iowa	66·47	"			

Average for the free states 40·63, and for the slave states 54·68 per cent. The Californian per centage is worthy of notice.

Labour, not Agricultural.—Per centage for the United States 18·50.

Free.—California	4·86 per cent.	Slave.—Alabama	7·65 per cent.
Iowa	10·93 „	Mississippi	8·08 „
Indiana	12·00 „	Georgia	9·34 „
Oregon	13·19 „	Tennessee	10·44 „
Illinois	13·83 „	South Carolina..	11·89 „
Michigan	14·32 „	Arkansas.....	13·94 „
New Hampshire..	15·81 „	Texas	14·45 „
Maine	16·49 „	Kentucky	14·87 „
Wisconsin	16·89 „	Missouri	15·86 „
Connecticut	17·33 „	Louisiana	19·78 „
Ohio	17·48 „	Florida	20·30 „
Massachusetts ..	19·62 „	North Carolina..	20·49 „
Utah	19·84 „	Virginia	21·31 „
Rhode Island	21·39 „	Maryland	25·45 „
New York	22·13 „	Delaware	30·20 „
Pennsylvania.....	24·04 „		
Vermont	24·94 „		
New Jersey	29·81 „		
Minnesota	32·15 „		
New Mexico.....	35·52 „		

This class consists of persons connected with railways and every species of conveyance—sawyers, colliers, &c., and labourers. Per cent. in free states 19·53; in slave states 15·95.

Army.—The troops are most numerous in proportion to persons employed in Oregon (7·46 per cent.), Minnesota (6·98), New Mexico (3·75), Florida (3·22), Texas (1·37). Per centage for the states 10.

Government Civil Service.—Per centage for the union 46. This class is comparatively most numerous in Minnesota (2·53), Florida (2·04), Texas (1·58), New Mexico (1·18), Maryland, including district of Columbia (1·12), and Louisiana (1·05).

Sea and River Navigation.—Average for the states 2·17 per cent.

Free.—New Mexico	·01 per cent.	Slave.—Tennessee.....	·15 per cent.
Minnesota.....	·17 „	Georgia.....	·23 „
Vermont	·17 „	Arkansas	·26 „
Iowa	·33 „	Mississippi	·39 „
Utah	·57 „	South Carolina....	·50 „
Indiana	·69 „	Kentucky	·54 „
Wisconsin	·72 „	Texas	·75 „
Illinois	·76 „	Alabama	·80 „
Ohio	·77 „	North Carolina....	1·19 „
California	·79 „	Virginia	1·44 „
New Hampshire....	·82 „	Missouri	1·93 „
Michigan.....	1·12 „	Delaware	3·37 „
Pennsylvania	1·33 „	Florida	5·39 „
New York	2·62 „	Louisiana	5·52 „
Oregon	3·36 „	Maryland.....	7·29 „
New Jersey.....	3·38 „		
Rhode Island	4·68 „		
Connecticut	4·95 „		
Massachusetts.....	6·64 „		
Maine	9·62 „		

Average of the free states 2·35, and of the slave states 1·70 per cent.

Law, Medicine, and Divinity.—Average for the states 1·76 per cent.

Free.—New Mexico	·26 per cent.	Slave.—Delaware	1·14 per cent.
Utah	·83 "	North Carolina ..	1·62 "
California	1·13 "	Maryland	1·76 "
Rhode Island	1·28 "	Kentucky	1·99 "
New Jersey	1·34 "	Tennessee	2·00 "
Maine	1·36 "	Virginia	2·11 "
Pennsylvania	1·46 "	Arkansas	2·23 "
Illinois	1·54 "	Missouri	2·26 "
Massachusetts	1·59 "	Georgia	2·28 "
New York	1·61 "	Louisiana	2·37 "
Connecticut	1·66 "	Alabama	2·60 "
Ohio	1·70 "	South Carolina ..	2·67 "
Indiana	1·70 "	Florida	2·72 "
New Hampshire ..	1·74 "	Mississippi	3·10 "
Michigan	1·84 "	Texas	3·19 "
Wisconsin	1·89 "		
Vermont	1·98 "		
Iowa	2·19 "		
Oregon	2·56 "		
Minesota	2·91 "		

Average for the free states 1·59, and for the slave states 2·18 per cent.

Other Pursuits requiring Education.—Per centage for the states 1·78.

Free.—California	·26 per cent.	Slave.—Arkansas	1·66 per cent.
New Mexico	·33 "	Maryland	2·11 "
Iowa	·86 "	Tennessee	2·13 "
Illinois	·96 "	Florida	2·30 "
Michigan	1·00 "	Kentucky	2·31 "
Wisconsin	1·02 "	Texas	2·33 "
Maine	1·06 "	Missouri	2·46 "
Indiana	1·22 "	North Carolina ..	2·47 "
Oregon	1·24 "	Virginia	2·48 "
New York	1·25 "	Delaware	2·64 "
New Hampshire ..	1·51 "	Louisiana	3·17 "
Utah	1·53 "	Georgia	3·20 "
Ohio	1·56 "	Alabama	3·62 "
Minesota	1·58 "	Mississippi	4·50 "
Pennsylvania	1·59 "	South Carolina ..	4·61 "
Vermont	1·69 "		
Massachusetts	1·82 "		
New Jersey	1·91 "		
Rhode Island	2·03 "		
Connecticut	2·23 "		

Average of the free states 1·40, and of the slave states 2·72 per cent.

Domestic Servants.—Average for the states 0·41 per cent. The largest per centage is in New Mexico (7·39); next come Rhode Island (1·78), Missouri (1·14), Maryland (1·12), and Oregon (1·03 per cent.)

Other Occupations.—Average for the union 0·41 per cent. This class is very insignificant.

One thing strikes us in looking over the preceding estimates. It is the marked superiority of the slave states in the classes "Law, Medicine, and Divinity" and "Other Pursuits requiring Education." This appears to be the rule, in the east and west alike. I need hardly say that the previous census exhibited a totally different result.

The educational statistics for 1850 are to be found in Tables XLI. and LXII. of the Census. These tables differ seriously from one another; and not knowing which to prefer, I have selected the second for analysis, as being in a form facilitating comparison with the tables previously given. It sets forth that there were being educated 3,642,694 persons, of whom—

At Colleges	27,159
Public schools	3,354,173
Academies and other schools....	261,362

Total 3,642,694

Or 18·2 per cent. on the free population, showing an improvement equal to 220,000 scholars on the ten years, allowing for increase of population.

Colleges.—Per centage of the free population of the United States attending these institutions ·14, distributed over the several states as follows. In California, New Mexico, Florida, Oregon, Utah, and Minesota, there are no colleges.

Free.—Wisconsin.....	·02 per cent.	Slave.—Arkansas.....	·09 per cent.
Iowa	·05 "	North Carolina ...	·09 "
Illinois	·05 "	Texas	·11 "
Maine	·05 "	Alabama.....	·13 "
Michigan	·08 "	Virginia	·14 "
New Hampshire	·09 "	Delaware	·16 "
New York.....	·09 "	Missouri.....	·17 "
New Jersey	·10 "	Louisiana	·17 "
Rhode Island	·10 "	Tennessee	·21 "
Massachusetts	·10 "	Maryland	·22 "
Indiana.....	·11 "	Kentucky	·24 "
Pennsylvania.....	·14 "	South Carolina	·25 "
Vermont	·15 "	Georgia	·29 "
Ohio	·18 "	Mississippi.....	·29 "
Connecticut	·20 "		

The slave states, therefore, still retain the lead in collegiate establishments. Average of the free states ·11, and of the slave states ·19 per cent.

Public Schools.—Average of the union 16·78 per cent. None in New Mexico, Utah, and Minesota in operation apparently. Thirteen schools are returned in Utah. In California there are comparatively few children to educate.

Free.—California	·05 per cent.	Slave.—Florida	3·90 per cent.
Oregon	·60 "	Texas	5·15 "
Illinois	14·77 "	Arkansas.....	5·22 "
Iowa	15·41 "	Georgia	6·24 "
Rhode Island.....	15·68 "	South Carolina..	6·29 "
New Jersey	15·98 "	Mississippi	6·32 "
Indiana	16·34 "	Maryland	6·55 "
Massachusetts	17·74 "	Alabama	6·62 "
Pennsylvania	17·90 "	Virginia	7·11 "
Connecticut	19·22 "	Missouri	8·70 "
Wisconsin	19·26 "	Loiusiana	9·18 "
New York	21·80 "	Kentucky	9·26 "
New Hampshire....	23·79 "	Delaware.....	10·05 "
Ohio	24·45 "	Tennessee	13·58 "
Michigan	27·78 "	North Carolina..	17·93 "
Vermont	29·75 "		
Maine	33·06 "		

Average of the free states 20·48 per cent., and of the slave states 9·04 per cent. This class, I presume, corresponds with the two "Primary and Common Schools" and "Scholars at Public Charge" in the previous census, or very nearly so.

Academies and other Schools.—Average for the states 1·31 per cent. None in Utah.

Free.—New Mexico	·07 per cent.	Slave.—Virginia.....	·95 per cent.
California	·18 "	Kentucky	1·23 "
Minnesota	·20 "	North Carolina.....	1·35 "
Michigan	·41 "	Arkansas	1·48 "
Illinois.....	·49 "	Missouri	1·48 "
Iowa.....	·55 "	Tennessee	1·66 "
Indiana	·63 "	Georgia.....	1·73 "
Ohio.....	·76 "	Alabama	1·93 "
Wisconsin	·89 "	Louisiana	1·95 "
Pennsylvania	1·03 "	Texas.....	2·19 "
Rhode Island	1·09 "	Mississippi	2·23 "
Maine	1·14 "	Delaware	2·25 "
Massachusetts	1·28 "	Maryland	2·41 "
New York	1·59 "	Florida	2·60 "
New Hampshire	1·67 "	South Carolina....	2·63 "
Connecticut	1·89 "		
New Jersey	1·96 "		
Vermont	2·19 "		
Oregon	6·33 "		

Average of the free states 1·14, and of the slave states 1·65 per cent.

Total being Educated.—Average for the states 18·23 per cent.

Free.—Utah	·00 per cent.	Slave.—Florida	6·50 per cent.
New Mexico	·07 "	Arkansas.....	6·79 "
Minnesota	·20 "	Texas	7·45 "
California	·23 "	Virginia	8·20 "
Oregon	6·93 "	Georgia	8·26 "
Illinois	15·31 "	Alabama	8·68 "
Iowa	16·01 "	Mississippi	8·84 "
Rhode Island.....	16·87 "	South Carolina..	9·17 "
Indiana	17·08 "	Maryland	9·18 "
New Jersey	18·04 "	Missouri	10·35 "
Pennsylvania	19·07 "	Kentucky	10·73 "
Massachusetts	19·12 "	Louisiana	11·30 "
Wisconsin	20·17 "	Delaware	12·46 "
Connecticut	21·31 "	Tennessee	15·45 "
New York	23·48 "	North Carolina..	19·37 "
Ohio	25·39 "		
New Hampshire....	25·55 "		
Michigan	28·27 "		
Vermont	32·09 "		
Maine	34·25 "		

Average of the free states 21·73, and of the slave states 10·88 per cent.

The state which had, in 1840, and still keeps, the unenviable pre-eminence of containing the largest proportion of ignorance, is North Carolina; but the proportion of education having increased so much as to place it first on the list of slave states, instead of, as before, the lowest, it may well be hoped that a speedy improvement will take place. A large increase in the proportion of education

has likewise taken place in the following slave states, viz., Tennessee, Kentucky, Louisiana, Missouri, and Arkansas.

In the free states, a falling off is noticeable in those states which had previously such enormous percentages—especially in Massachusetts; but as it is unaccompanied by any serious increase of ignorance among the natives, I presume that the change is rather in form than in substance (as home education may have increased); or that the present proportion has been found sufficient. Further west, an increased proportion is observable in Ohio, Indiana, Illinois, Iowa, Wisconsin, and Michigan.

The Table XLI., also on education, it will be well to notice briefly, as it differs from that just analysed, and I cannot decide between them. It states the numbers “attending school in the United States, during the year, as returned in the schedule of population” —

Whites.....	4,063,046
Free coloured	26,461
Total	4,089,507
<hr/>	
or, Native	3,942,081
Foreign	147,426
Total	4,089,507

This is 20·78 per cent. on whites, 6·09 on free coloured; or 22·26 on natives, 6·47 on foreigners; the percentages on all free persons being for each state as follows, and for the union 20·46 per cent.

Free.—New Mexico	0·76 per cent.	Slave.—Florida	10·00 per cent.
California	1·07	Virginia	11·57
Minesota	3·44	Louisiana	12·48
Oregon	14·12	Texas	12·56
Utah	17·92	Maryland	12·69
Iowa	18·45	South Carolina..	14·24
Wisconsin	18·47	Arkansas.....	14·35
New Jersey	18·72	Alabama	14·66
Rhode Island.....	19·59	Georgia	14·68
Illinois	21·41	Missouri	16·02
Pennsylvania.....	21·83	Delaware.....	16·14
Massachusetts ...	22·34	Mississippi	16·45
Indiana	22·36	Kentucky	17·01
New York	22·38	North Carolina..	17·37
Connecticut	22·57	Tennessee	19·15
Ohio	26·00		
Michigan	26·65		
New Hampshire...	27·74		
Vermont	29·37		
Maine	31·93		

Average of the free states 23·01, and of the slave states 15·12 per cent. The circumstance of there being so few children in California will partly account for the small proportion of education. I conjecture that the increased amount of education shown in the above table, generally from 2 to 7 per cent., is partly due to itinerant schoolmasters; and that the diminution in those states where it most largely exists may be owing to the students being (perhaps) returned under the states to which their families belong. The

former table I imagine to be compiled from the returns of the schools themselves at the period of the census.

Table XLIII. states that there were, in the United States in 1850, 1,053,420 free persons above 20 years of age, unable to read or write, out of a population of 9,641,157, or 10·9 per cent. This proportion is considerably higher than that in 1840, chiefly owing to the immigration of vast numbers of ignorant persons. The numbers for 1840 include whites alone; but those for 1850 are divided thus:—

White	9,421,637	.....	Illiterate	962,898	or 10·2 per cent.
Free coloured	219,520	.....	„	90,522	or 41·2 „

The per-centages for individual states were as follows:—

Whites.—Average as above 10·2 per cent.

Free.—New Hampshire	1·6 per cent.	Slave.—Maryland	9·7 per cent.
Maine	2·1 „	Mississippi	10·9 „
Connecticut	2·3 „	South Carolina	12·5 „
Oregon	2·4 „	Delaware	13·2 „
Utah	3·0 „	Missouri	14·1 „
Vermont	3·7 „	Texas	15·4 „
Rhode Island	4·1 „	Louisiana	15·8 „
Michigan	4·3 „	Florida	18·1 „
Wisconsin	4·3 „	Virginia	18·6 „
Massachusetts	4·8 „	Georgia	18·9 „
New York	5·7 „	Alabama	18·9 „
New Jersey	6·1 „	Kentucky	20·1 „
Pennsylvania	6·1 „	Tennessee	24·5 „
California	6·4 „	Arkansas	26·0 „
Ohio	6·9 „	North Carolina	29·2 „
Iowa	10·0 „		
Illinois	10·8 „		
Indiana	17·1 „		
Minesota	19·2 „		
New Mexico	83·7 „		

Average of the free states 6·7, and of the slave states 18·6 per cent.

Free Coloured.—Average as above 41·2 per cent.

Free.—Minnesota	0 per cent.	Slave.—South Carolina	21·4 per cent.
Oregon	5·4 „	Alabama	21·7 „
Utah	10·0 „	Mississippi	25·2 „
Rhode Island	12·0 „	Texas	30·1 „
Vermont	12·4 „	Missouri	31·0 „
Connecticut	12·8 „	Georgia	33·6 „
California	14·1 „	Louisiana	37·4 „
Massachusetts	15·0 „	Arkansas	37·4 „
New Hampshire	16·1 „	Tennessee	37·7 „
Maine	17·9 „	Virginia	45·1 „
New Mexico	20·0 „	Kentucky	55·1 „
Iowa	20·8 „	North Carolina	56·9 „
Wisconsin	25·7 „	Maryland	57·2 „
New York	26·4 „	Florida	61·1 „
Michigan	27·4 „	Delaware	69·6 „
Pennsylvania	33·0 „		
New Jersey	36·6 „		
Ohio	41·9 „		
Indiana	45·1 „		
Illinois	46·3 „		

Average of the free states 30·8, and of the slave states 50·7 per cent.

But the large numbers of ignorant foreigners render the figures referring to whites unfair to the native Americans, especially in the north, where most of the immigrants are located. The population, free whites and coloured, is redivided thus:—

Native population (all ages)	17,708,299	.....	Illiterate above 20 yrs.	858,306
Foreign ditto	2,279,264	.....	„	195,114

Or 4·85 per cent. on the native, and 8·6 on the foreign population. About half the population of the states is under 20 years; but a less proportion of the foreign than of the native population is to be expected.

Natives.—Per-centage for the states, as above, 4·85.

Free.	Vermont	.....	·22 per cent.	Slave.—Mississippi	.....	4·62 per cent.
	Massachusetts	...	·22 „	Texas	.....	5·94 „
	New Hampshire	...	·31 „	South Carolina	.....	5·99 „
	Connecticut	.....	·39 „	Missouri	.....	6·75 „
	Maine	.....	·39 „	Georgia	.....	7·97 „
	Wisconsin	...	·80 „	Alabama	.....	8·06 „
	Oregon	.....	·82 „	Florida	.....	8·45 „
	Rhode Island	.....	1·01 „	Maryland	.....	8·84 „
	New York	.....	1·26 „	Louisiana	.....	8·99 „
	Utah	.....	1·30 „	Kentucky	.....	9·12 „
	Michigan	.....	1·54 „	Virginia	.....	9·44 „
	Pennsylvania	.....	2·56 „	Tennessee	.....	10·33 „
	New Jersey	.....	2·98 „	Arkansas	.....	10·53 „
	Ohio	.....	3·24 „	Delaware	.....	11·64 „
	California	.....	3·30 „	North Carolina	.....	13·86 „
	Iowa	.....	4·14 „			
	Illinois	.....	4·80 „			
	Minnesota	.....	6·32 „			
	Indiana	.....	7·46 „			
	New Mexico	.....	41·27 „			

Average of the free states 2·64, and of the slave states 9·01 per cent.

Foreigners.—Per-centage for the states, as above, 8·6.

Free.	Utah	.....	1·6 per cent.	Slave.—South Carolina	...	1·2 per cent.
	Ohio	.....	4·1 „	Arkansas	.....	1·2 „
	Wisconsin	.....	4·4 „	Mississippi	.....	1·5 „
	Iowa	.....	5·1 „	Alabama	.....	1·6 „
	Oregon	.....	5·2 „	Missouri	.....	2·4 „
	Illinois	.....	5·2 „	Virginia	.....	4·8 „
	Michigan	.....	5·4 „	Georgia	.....	5·8 „
	Indiana	.....	5·6 „	Maryland	.....	6·7 „
	Pennsylvania	.....	8·2 „	Tennessee	.....	7·0 „
	New Jersey	.....	9·8 „	Kentucky	.....	7·2 „
	Rhode Island	.....	9·8 „	Delaware	.....	7·7 „
	Connecticut	.....	10·2 „	Louisiana	.....	9·1 „
	New York	.....	10·3 „	Florida	.....	10·6 „
	Maine	.....	12·8 „	North Carolina	.....	12·2 „
	California	.....	13·1 „	Texas	.....	13·7 „
	New Hampshire	...	14·3 „			
	Massachusetts	.....	15·9 „			
	Vermont	.....	16·5 „			
	Minnesota	.....	19·7 „			
	New Mexico	.....	28·0 „			

Average of the free states 9·0, and of the slave states 6·2 per cent.

It must be considered that an enormous proportion of the Californian population consists of adult males; also that, by the free coloured being included with whites under "natives," those states which contain most of the former are placed under a disadvantage. To obviate as far as possible these objections, I have formed a rough estimate of the proportion of illiterate *native whites* above 20 years of age to the class among whom they are found, as follows:—

Native Whites.—Per-centage for the states 9·72.

Free.—Massachusetts	·25 per cent.	Slave.—Maryland	9·67 per cent.
Vermont	·39 "	Mississippi	11·13 "
Connecticut	·42 "	South Carolina..	13·08 "
New Hampshire....	·52 "	Delaware.....	13·42 "
Maine.....	·75 "	Texas	14·36 "
Rhode Island	1·52 "	Missouri	16·76 "
Oregon	1·89 "	Louisiana	17·14 "
Wisconsin	1·96 "	Florida.....	18·32 "
New York	2·00 "	Virginia	19·07 "
Utah	3·21 "	Georgia	19·15 "
Michigan	3·34 "	Alabama	19·46 "
California	3·36 "	Kentucky	20·72 "
New Jersey	4·32 "	Tennessee	24·73 "
Pennsylvania	4·71 "	Arkansas.....	26·54 "
Ohio	7·00 "	North Carolina..	29·28 "
Iowa	10·50 "		
Illinois	11·67 "		
Minnesota	12·56 "		
Indiana	18·02 "		
New Mexico	86·06 "		

Average for the free states 5·12, and for the slave states 19·39 per cent.

The ignorance even of the native whites has, it will be seen, increased during the ten years, 1840-50, in some instances to a serious extent. It is, however, agreeable to notice the exertions of some of the most ignorant states in the way of education. The adventurers, foreign and free coloured, who have proceeded to the west, seem to be generally better educated than those remaining in the neighbourhood of the coast; but the rule is by no means universal.

I have enlarged thus fully on the subject of ignorance for the reason before mentioned, viz., that I consider the proportion of ignorance a better test of the educational condition of the country than the statistics of school attendance; nevertheless, I would here remark that they both possess their values, inasmuch as the latter shows what course the former is soon likely to take.

The following proportional table is on the same basis as that previously constructed, the standard being the eastern slave state ratio, and the divisions also the same as before—the new territories and states being so young that the most extraordinary proportions prevail in them.

	To every 100 in East Slave States.			
	East Free.	West Free.	North Slave.	West Slave.
Out of a given number of free males over 15 years of age employed, there are employed in—				
Commerce, trade, manufac- tures, &c.....}	180	98	192	104
Agriculture	62	108	40	96
Labour not agricultural	144	91	177	105
Sea and river navigation	255	70	619	140
Law, medicine, and divinity	71	79	76	102
Other pursuits requiring education.....}	53	37	76	79
Out of a given number of free per- sons, there are being educated in—				
Colleges	63	37	111	79
Public schools	225	186	74	83
Academies, &c.	83	37	152	94
All kinds of institutions	202	163	85	84
Another account (Table XLI.)	154	143	86	102
Out of a given number of native whites above 20 years of age there are unable to read or write about	15	58	49	93

MISCELLANEA.

Twenty-Fourth Meeting of the British Association for the Advancement of Science, held at Liverpool, 21st—26th Sept. 1854. Section F. Statistics.

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The following Papers occupied the attention of the Section, viz.:

1. Suggestions for improving the present mode of keeping and stating the National Accounts. By Charles Jellicoe, Esq.
2. The Preston Strike: its causes and consequences. By Henry Ashworth, Esq.
3. Magnitude and Fluctuation of the Circulation of Bills of Exchange, 1816–1853. Statement of some of the results of a further extensive collection of Data. By William Newmarch, Esq.
4. On the Laws of the Currency, as exemplified in the Circulation of Country Bank Notes in England since the passing of the Act of 1844. By James William Gilbart, Esq., F.R.S.
5. Statistics of Nice Maritime. By Colonel Sykes, F.R.S.
6. Facts and Statements connected with the Question, whether, in consequence of the discoveries of the last six years, the exchangeable value of gold in this country has fallen below its former level. By William Newmarch, Esq.
7. The Progress and Direction of British Exports, and the influence thereon of Free Trade and Gold. By Richard Valpy, Esq.
8. On the effects of good and bad times on the Committals to Prison. By the Rev. John Clay.
9. Statistics of Poor Relief and Movement of Population in the "Commercial District" in the Hundred of Wirral, Cheshire. By Mr. McNerney, communicated by Sir J. P. Boileau, Bart., F.R.S.
10. On the Deaf and Dumb in the United Kingdom in 1851. By David Buxton, Esq.
11. On the Cost and Current Prices of Wheat in England in 1844–54. By J. T. Danson, Esq.
12. On the French System of Measures, Weights, and Coins. By James Yates, Esq., M.A., F.R.S.
13. On Decimal Coinage and Accounts. By Theodore W. Rathbone, Esq.
14. On Decimal Coinage. By William Miller, Esq.
15. On Decimal Coinage. By Jacob J. Franklin, Esq.
16. Discussion on Decimal Coinage.
17. On the Rise, Progress, and Present Condition of Joint-Stock Banks. By James Knight, Esq.
18. On the Education of the Poor in Liverpool. By the Rev. A. Hume, D.C.L., LL.D., F.S.A.
19. On the Reformation of Offenders. By J. B. H. Baker, Esq.
20. On the Non-Russian Population of the Russian Empire. By Dr. Latham.
21. On the Decimalization of the Tariff. By William Miller, Esq., communicated by Robert R. R. Moore, Esq.
22. On the Supply of Gold from Australia and from English Rocks. By John Calvert, Esq.
23. On the Treatment of Abandoned Workings of the Australian Gold Fields. By H. E. Michel, Esq., B.A.
24. On the Causes of the Fluctuations in the Herring Fisheries. By John Cleghorn, Esq.

**THE MARRIAGES, BIRTHS, AND DEATHS,
REGISTERED IN THE DIVISIONS, COUNTIES, AND DISTRICTS OF ENGLAND.**

The Marriages for the Quarter ended March, 1854, and the Births and Deaths for the Quarter ended June, 1854,

AS PUBLISHED BY AUTHORITY OF THE REGISTRAR-GENERAL.

This return comprises the births and deaths registered by 2,191 registrars in all the districts of England during the Spring quarter ended June 30th, 1854; and the marriages in 12,039 churches or chapels, about 3,504 registered places of worship unconnected with the Established Church, and 625 superintendent registrars' offices, in the quarter that ended March 31st, 1854.

All the returns present a favourable view of the state of the country. The marriages in the first quarter of the year exceed the average proportion. In the quarter ended June 30th, the number of births that have been registered greatly exceeds the numbers returned in any previous quarter; and the mortality has been below the average. Cholera has not prevailed to any extent, but the mortality of the town districts has slightly exceeded the average, and the diminution in the mortality is found to be chiefly in the country districts.

MARRIAGES.—33,144 marriages were celebrated in the quarter ended March 31st, and in proportion to the population, this number exceeds the average of the ten corresponding quarters, but it is less by 1,870 than the marriages in the winter of 1853. The pressure of the high price of provisions has had some effect in depressing the marriages. On comparing the numbers in the corresponding quarters of 1853 and 1854, the decrease is found to be greatest in London, in Devonshire, in Shropshire,

Marriages, Births, and Deaths, returned in the Years 1842-54 and in the Quarters of those Years.

YEARS.....	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851*	1852	1853	1854
Marriages	118825	123818	132249	143743	145664	135845	138230	141883	152744	154206	158439	164021	...
Births	517739	527335	540763	543521	572625	539965	563059	578159	593422	615865	624171	612341	...
Deaths	349519	346445	356933	349366	390315	423304	399833	440839	368995	395174	407938	421775	...
MARRIAGES.													
Quarters ended the last day of													
March	25860	25285	26387	29551	31417	27480	28398	28429	30567	32724	33933	35014	33144
June	30048	31113	34268	35300	37111	35197	34721	35844	39204	38635	40007	40335	...
September	27288	28847	31675	35003	35070	32439	32995	33874	37636	37316	38291	39786	...
December	35629	38573	39919	43889	42066	40729	42116	43736	45337	45531	47208	48886	...
BIRTHS.													
March	135615	136837	143578	143080	145108	146453	139736	158772	144551	157986	161776	161595	160892
June	134096	131279	136941	136853	149450	139072	149760	153693	155865	159073	159136	158718	172420
September	123296	128161	130078	132369	138718	127173	140359	135223	146911	150594	151193	147581	...
December	124732	131045	130166	131219	139349	127267	133204	135471	146095	148912	152066	144444	...
DEATHS.													
March	96314	94926	101024	104664	89484	119672	120032	105570	98430	105306	106682	118241	111970
June	86538	87234	85337	89149	90231	106718	99727	102153	92871	99468	100813	107861	102666
September	82339	76792	79705	74872	101663	93435	87635	135227	85849	91381	100497	92332	...
December	84328	87493	90864	80651	108937	103479	92436	97589	91845	99019	99946	103341	...

* The numbers up to 1851 have appeared in the Annual Reports.

in Lancashire, in the West Riding of Yorkshire, and in Westmorland. In Staffordshire, Warwickshire, Durham, and Northumberland, where the iron and coal districts abound, the marriages exhibit no sensible decrease.

BIRTHS.—172,420 births were registered in the quarter ended June 30th, or 13,702 births in excess of the births in the spring quarter of 1853. On an average the births were at the annual rate of 3·45 per cent. on the population in the ten spring quarters, 1844-53; in the spring quarter of 1854 the rate was 3·72 per cent. The increase is observable in every division of the country.

INCREASE OF POPULATION.—The number of children born last quarter was 172,420, and in the same period 102,666 men, women, and children died; therefore the registers discover a clear gain to the population of 69,754. But the increase or decrease of a people is not dependent entirely on the facts recorded in its registers; immigration and emigration materially modify the result. The number of emigrants who left English ports, where emigration officers are stationed, as furnished by the Commissioners, was 99,545. They are not distinguished in this return as regards the parts of the United Kingdom from which they came; but a large proportion were Irish, and many Scotch, who came hither only for embarkation. Of 116,861 persons who left the ports of the United Kingdom, the United States was the place of desti-

England :—Annual Rate, per cent., of Marriage, Birth, and Death, during the Years 1844-54, and the Quarters of those Years.*

Estimated Population of England in thousands in the middle of each Year.....	16516	16716	16919	17124	17331	17541	17754	17983	18205	18402	...	18617
YEARS	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	Mean, 1844-53	1854
Marriages.....	·801	·860	·861	·793	·798	·809	·860	·858	·870	·891	·840	...
Births.....	3·274	3·251	3·385	3·153	3·249	3·296	3·343	3·425	3·428	3·328	3·313	...
Deaths.....	2·161	2·090	2·307	2·472	2·307	2·513	2·078	2·198	2·241	2·292	2·266	...
MARRIAGES.												
Quarters ended the last day of												
March.....	·614	·721	·757	·655	·661	·661	·702	·742	·729	·775	·705	·726
June.....	·834	·849	·882	·826	·805	·822	·888	·864	·883	·880	·853	...
September.....	·760	·830	·822	·751	·755	·766	·840	·822	·833	·856	·804	...
December.....	·955	1·038	·983	·940	·961	·986	1·010	1·000	1·024	1·050	·995	...
BIRTHS.												
March.....	3·507	3·401	3·498	3·488	3·252	3·575	3·321	3·567	3·581	3·575	3·486	3·523
June.....	3·334	3·291	3·551	3·265	3·474	3·523	3·630	3·557	3·512	3·464	3·450	3·722
September.....	3·123	3·140	3·251	2·945	3·211	3·056	3·281	3·317	3·290	3·177	3·179	...
December.....	3·115	3·103	3·256	2·938	3·038	3·053	3·253	3·270	3·300	3·101	3·143	...
DEATHS.												
March.....	2·467	2·554	2·157	2·850	2·794	2·462	2·261	2·388	2·362	2·616	2·491	2·452
June.....	2·077	2·144	2·144	2·506	2·313	2·341	2·107	2·224	2·225	2·354	2·244	2·216
September.....	1·913	1·776	2·382	2·163	2·005	3·057	1·917	2·013	2·187	1·988	2·140	...
December.....	2·175	1·908	2·545	2·389	2·108	2·199	2·045	2·174	2·169	2·219	2·193	...

* The table may be read thus, without reference to the decimal points:—In the year 1848, to 100,000 of the population of England there were 798 marriages, 3,249 births, and 2,307 deaths registered. The annual rates of marriage in each of the four quarters were ·661, ·805, ·755, and ·961 per cent.; the rates of death 2·794, 2·313, 2·005, and 2·108 per cent. In reading the population on the first line add three ciphers (000). The three months January, February, March, contain 90, in leap year 91 days; the three months April, May, June, 91 days; each of the two last quarters of the year 92 days. For this inequality a correction has been made in the calculation.

nation for 67,668; British North America for 26,600; the Australian colonies for 21,998; and 595 set out for other places.* In the preceding three winter months the number who left did not greatly exceed a third part of the above number.

PRICES OF PROVISIONS.—In the last quarter consumers were not more fortunate as regards the price of the chief articles of food than they were in the preceding three months. Beef, by the carease, rose from $5\frac{1}{4}d.$ to $5\frac{3}{4}d.$; the mean price of mutton remained at $5\frac{1}{4}d.$, that of potatoes rose from 140s. to 155s. per ton. The average

The Average Prices of Consols, of Wheat, Meat, and Potatoes, also the Average Quantity of Wheat sold and imported Weekly, in each of the nine Quarters ended June 30th, 1854.

Quarters ended	Average Price of Consols (for Money.)	Average Price of Wheat per Quarter in England and Wales.	Wheat sold in the 290 Cities and Towns in England and Wales making Returns.	Wheat and Wheat Flour entered for Home Consumption at Chief Ports of Great Britain.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carease).		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.
			Average Number of Quarters weekly.		Beef.	Mutton.	
1852	£						
June 30.	99 $\frac{5}{8}$	40s. 10d.	87,949	54,675	3 $\frac{1}{4}d.$ —4 $\frac{3}{4}d.$ Mean 4d.	3 $\frac{3}{4}d.$ —5 $\frac{1}{4}d.$ Mean 4 $\frac{1}{2}d.$	85s.—110s. Mean 97s. 6d.
Sept. 30.	100	41s. 2d.	78,712	67,912	3 $\frac{1}{4}d.$ —5d. Mean 4 $\frac{1}{8}d.$	4d.—6d. Mean 5d.	80s.—100s. Mean 90s.
Dec. 31.	100 $\frac{5}{8}$	40s. 5d.	111,224	72,870	3d.—5d. Mean 4d.	4 $\frac{1}{4}d.$ —6 $\frac{1}{4}d.$ Mean 5 $\frac{1}{4}d.$	90s.—120s. Mean 105s.
1853							
Mar. 31.	99 $\frac{5}{8}$	45s. 7d.	95,115	63,530	3 $\frac{3}{4}d.$ —5 $\frac{1}{4}d.$ Mean 4 $\frac{1}{2}d.$	4 $\frac{3}{4}d.$ —6 $\frac{3}{4}d.$ Mean 5 $\frac{3}{4}d.$	110s.—145s. Mean 127s. 6d.
June 30.	100 $\frac{1}{8}$	44s. 6d.	84,559	82,623	4d.—5 $\frac{3}{4}d.$ Mean 4 $\frac{7}{8}d.$	5d.—6 $\frac{3}{4}d.$ Mean 5 $\frac{5}{8}d.$	110s.—145s. Mean 127s. 6d.
Sept. 30.	97	51s. 10d.	86,087	120,020	4 $\frac{1}{4}d.$ —6d. Mean 5 $\frac{1}{8}d.$	5d.—7 $\frac{1}{4}d.$ Mean 6 $\frac{1}{8}d.$	110s.—125s. Mean 117s. 6d.
Dec. 31.	93 $\frac{5}{8}$	69s. 10d.	79,002	91,627	4d.—6d. Mean 5d.	4 $\frac{1}{4}d.$ —7d. Mean 5 $\frac{3}{8}d.$	135s.—165s. Mean 150s.
1854							
Mar. 31.	91	79s. 6d.	60,022	103,519	4 $\frac{1}{4}d.$ —6 $\frac{1}{4}d.$ Mean 5 $\frac{1}{4}d.$	4 $\frac{1}{2}d.$ —7d. Mean 5 $\frac{3}{4}d.$	120s.—160s. Mean 140s.
June 30.	88 $\frac{5}{8}$	78s. 4d.	55,842	103,331	4 $\frac{1}{2}d.$ —6 $\frac{1}{4}d.$ Mean 5 $\frac{3}{8}d.$	4 $\frac{3}{4}d.$ —6 $\frac{3}{4}d.$ Mean 5 $\frac{3}{4}d.$	137s.—172s. Mean 155s.

Note.—The total number of quarters of wheat sold in England and Wales for the 13 weeks ended June 30th, 1852, was 1,143,339; for the 13 weeks ended September 30th, 1,023,251; for the 13 weeks ended December 31st, 1,445,906; for the 13 weeks ended March 31st, 1853, 1,236,493; for the 13 weeks ended June 30th, 1853, 1,099,261; for the 13 weeks ended September 30th, 1853, 1,119,128; for the 14 weeks ended December 31st, 1853, 1,106,027; for the 13 weeks ended March 31st, 1854, 780,282; and for the 13 weeks ended June 30th, 1854, 725,946. The total number of quarters entered for Home Consumption was, respectively, 710,780; 882,850; 947,310; 825,886; 1,074,095; 1,560,255; 1,191,149 (13 weeks); 1,345,743; and 1,343,305.

* From a Return with which the Registrar-General has been favoured by the Emigration Commissioners.

price of wheat slightly declined, having been, in the previous three months, 79s. 6d., in the last three months 78s. 4d. per quarter, while the quantity sold in the English and Welsh towns that make returns was less in the latter period by 4,180 quarters weekly, and the amount of wheat and wheat flour imported for home consumption remained nearly the same. Wheat was 33s. 10d. per quarter dearer than in the corresponding period of 1853. Beef and mutton in Leadenhall and Newgate, which were then 4 $\frac{7}{8}$ d. and 5 $\frac{5}{8}$ d., averaged 5 $\frac{3}{8}$ d. and 5 $\frac{3}{4}$ d., while potatoes are dearer by more than 20 per cent. The working classes have suffered from the necessity of increased expenditure, which has been aggravated in some parts by slackness of trade, but generally sufficient employment and good wages have enabled them to live in circumstances of comfort.

STATE OF THE PUBLIC HEALTH.—The Spring of 1854 was a season of more health to the people of England than the Spring of 1853. In the quarter to which the present returns refer 102,666 deaths were registered; fewer by 5,195 than in the same period of the previous year. In large town populations, however, the public health was by no means good during last quarter; the rate of mortality was higher than the average, for 25 died out of every thousand persons, whilst 24 represents the average annual proportion. In the freer country regions and small towns, the spring months were propitious, the average annual rate of mortality for the same season being 22 out of a thousand, and the actual mortality last quarter having been only 20 out of a thousand.

Deaths in the Spring Quarters.

	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	Total 1844-53	1854
In 117 Dis- tricts, com- prising the chief towns...	38977	40847	43737	51585	46552	48070	42886	47774	48357	51734	460519	50822
In 508 Dis- tricts, com- prising chiefly small towns and country parishes	46360	48302	46494	55133	53178	54083	49989	51865	52456	56127	513987	51844
Total.....	85337	89149	90231	106718	99730	102153	92875	99639	100813	107861	974506	102666

Population, Deaths, and Mortality per cent. in the Spring Quarters, 1844-54.

	Population Enumerated.		Deaths in 10 Spring Quarters, 1844-53.	Annual Rate of Mortality of 10 Spring Quarters, 1844-53.	Annual Rate of Mortality in the Spring Quarter 1854.
	June 6-7th, 1841.	March 31st, 1851.			
In 117 Districts, com- prising the chief towns	6,612,958	7,795,882	460,519	2.454	2.520
In 508 Districts, com- prising chiefly small towns and country parishes	9,301,190	10,126,886	513,987	2.156	1.972
All England	15,914,148	17,922,768	974,506	2.244	2.216

MORTALITY OF THE METROPOLIS.

A Table of the Deaths in London from all Causes, Registered in the June Quarters of the Four Years, 1851-54.

CAUSES OF DEATH.	Quarters ended June,				CAUSES OF DEATH.	Quarters ended June,			
	1851	1852	1853	1854		1851	1852	1853	1854
ALL CAUSES	18,093	13,173	15,030	15,055	III. Scrofula	115	124	101	125
SPECIFIED CAUSES	12,056	13,036	14,807	14,880	Tabes Mesenterica	100	154	262	208
I. Zymotic Diseases	2,662	2,325	2,079	3,686	Phthisis or Consumption	1,815	1,700	1,071	1,897
<i>Sporadic Diseases:</i>					Hydrocephalus	404	437	403	356
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	547	603	665	653	IV. Cephalitis	154	127	152	144
III. Tubercular Diseases	2,584	2,545	2,502	2,647	Apoplexy	313	295	352	312
IV. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,545	1,461	1,682	1,700	Paralysis	267	233	275	313
V. Diseases of the Heart and Blood Vessels	563	520	612	558	Delirium Tremens	32	39	42	50
VI. Diseases of the Lungs and of the Organs of Respiration	2,117	2,088	2,700	2,271	Chorea	6	3	2	1
VII. Diseases of the Stomach, Liver, and other Organs of Digestion	707	703	885	812	Epilepsy	91	95	118	103
VIII. Diseases of the Kidneys, &c.	156	171	158	106	Tetanus	9	11	2	5
IX. Childbirth, Diseases of the Uterus, &c.	105	132	99	90	Insanity	20	30	32	30
X. Rheumatism, Diseases of the Bones, Joints, &c.	101	105	118	104	Convulsions	511	499	542	549
XI. Diseases of the Skin, Cellular Tissue, &c.	23	30	30	41	Disease of Brain, &c.	132	150	165	172
XII. Malformations	31	41	44	52	V. Pericarditis	32	37	27	30
XIII. Premature Birth and Debility	360	381	336	494	Aneurism	14	19	30	21
XIV. Atrophy	318	305	470	452	Disease of Heart, &c.	402	464	555	487
XV. Age	540	573	532	533	VI. Laryngitis	52	64	70	87
XVI. Sudden*	105	107	128	183	Bronchitis	861	934	1,390	962
XVII. Violence, Privation, Cold, and Intemperance	457	443	589	500	Pleurisy	35	49	45	40
					Pneumonia	969	783	931	951
					Asthma	151	139	138	130
					Disease of Lungs, &c.	109	119	100	101
					VII. Teething	173	146	222	170
					Quincy	11	21	10	18
					Gastritis	30	19	19	23
					Enteritis	73	84	76	75
					Peritonitis	51	50	47	44
					Ascites	32	26	43	31
					Ulceration of Intestines, &c.	23	34	38	31
					Hernia	36	27	44	30
					Ileus	42	30	42	28
					Intussusception	10	15	10	12
					Stricture (of the Intestinal Canal)	10	16	19	9
					Disease of Stomach, &c.	63	72	68	70
					Disease of Pancreas	1	...	1	2
					Hepatitis	49	47	50	58
					Jaundice	45	49	46	57
					Disease of Liver	144	139	161	149
					Disease of Spleen	4	6	4	2
					VIII. Nephritis	11	4	8	8
					Nephria (or Bright's Disease)	32	47	30	45
					Ischuria	3	2	3	2
					Diabetes	10	11	12	19
					Stone	9	11	8	10
					Cystitis	7	6	9	12
					Stricture of Urethra	7	20	10	17
					Disease of Kidneys, &c.	77	70	73	83
					IX. Paramenia	3	4	3	1
					Ovarian Dropsy	9	13	11	9
					Childbirth, <i>see</i> Metria	52	70	49	55
					Disease of Uterus, &c.	41	39	36	34
					X. Arthritis	4	3	4	1
					Rheumatism	56	58	58	57
					Disease of Joints, &c.	41	44	56	46
					XI. Carbuncle	3	8	15	25
					Phlegmon	6	8	4	8
					Disease of Skin, &c.	14	14	11	18
					XVII. Intemperance	16	20	18	24
					Privation	5	8	12	3
					Want of Breast Milk, <i>see</i> Privation and Atrophy	52	48	62	58
					Neglect .....	...	1	3	...
					Cold, <i>see</i> Privation .....	...	5	2	...
					Poison	10	19	26	17
					Burns and Scalds	48	59	88	61
					Hanging, &c.	50	78	86	57
					Drowning	70	50	81	81
					Fractures and Contusions	159	121	171	160
					Wounds	31	19	33	23
					Other Violence	7	15	7	22
					Causes not specified	137	77	103	175

NOTE.—The thirteen weeks of 1854, constituting the June quarter in the Weekly Tables of Mortality, ended July 1st, in which 15,055 deaths were registered. In the quarter ended June 30th 15,144 deaths were registered.

* Under the head of *sudden deaths* are classed not only deaths described as sudden, of which the cause has not been ascertained or stated; but also all deaths returned by the coroner in vague terms, such as "found dead," "natural causes," &c., &c.

On the Meteorology of England and Scotland during the Quarter ended June 30th, 1854. By JAMES GLAISHER, Esq., F.R.S., Sec. of the British Meteorological Society.

The period of warm weather which set in on February so continued till April 21st; the mean excess of daily temperature within this period was $3\cdot8^{\circ}$. On April 22nd a cold period began, and continued till the end of the quarter; the mean daily defect of temperature from April 22nd to June 30th was 3° . The marked change in the weather which took place on April 22nd caused very great injury to vegetation generally, and many even hardy plants were killed. The fall of rain in June amounted to one inch only, and the defect on the quarter exceeds two inches.

The mean temperature of the air at Greenwich for the quarter ended May, constituting the three spring months, was $47^{\circ}\cdot7$, being $1^{\circ}\cdot3$ above the average of 80 years.

1854. Months.		Temperature of									Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.						Water of the Thames.
		Mean.	Diff. from Average of 80 Years.	Diff. from Average of 13 Years.	Mean.	Diff. from Average of 13 Years.	Mean.	Diff. from Average of 13 Years.	Mean.	Diff. from Average of 13 Years.	Mean.	Diff. from Average of 13 Years.	Mean.	Diff. from Average of 13 Years.
April	48·4	+2·7	+1·9	45·0	+1·4	41·1	+0·8	23·7	+6·8	52·2	In. ·274	+·006	Gr. 3·1	0·0
May	50·9	-1·7	-2·5	48·6	-1·0	45·9	-0·2	21·3	+2·2	54·9	·327	-·002	3·7	0·0
June	55·7	-2·3	-3·6	52·7	-1·6	50·0	-1·2	19·2	-0·6	59·1	·371	-·018	4·2	-0·1
Mean.....	51·7	-0·4	-1·4	48·8	-0·1	45·7	-0·2	21·4	+2·8	55·4	·324	-·005	3·7	0·0

1854. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Average of 13 Years.	Mean.	Diff. from Average of 13 Years.	Mean.	Diff. from Average of 13 Years.	Amnt.	Diff. from Average of 39 Years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
											At or below 32°.	Be- tween 32° and 40°.	Above 40°.		
April	·775	-·027	In. 29·985	+·266	Gr. 542	+ 2	In. 0·6	-1·1	Miles. 78	23	5	2	14·8	47·0	
May	·850	+·070	29·667	-·119	534	+ 1	3·3	+1·7	100	11	13	7	23·5	44·0	
June	·825	+·067	29·735	-·033	529	+ 3	1·0	-2·8	102	...	7	23	33·2	53·0	
Mean.....	·817	+·037	29·796	+·031	535	+ 2	Sum 4·9	Sum -2·2	93	Sum 34	Sum 25	Sum 32	14·8	53·0	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred, or thunder was heard and lightning seen, the 9th April at Royston; on the 15th at Guernsey; on the 18th at Hartwell House; on the 19th at Liverpool and Isle of Man; on the 21st at Rose Hill, Bicester, Oxford, Stone,

Hartwell House, Hartwell Rectory, and Linslade; and on the 27th at Royston and Nottingham. On 1st May at Hartwell Rectory; on the 2nd at Rose Hill, Bicester, Oxford, Stone, Hartwell House, Linslade, Cardington, Bedford, Nottingham, Gainsborough, Wakefield, and Dunino; on the 3rd at Warrington; on the 4th at Clifton, Hartwell House, Nottingham, Warrington, and North Shields; on the 5th at Exeter, Stone, Hartwell House, Hartwell Rectory, Linslade, Cardington, Bedford, Grantham, Gainsborough, Liverpool, Wakefield, North Shields, and Dunino; on the 7th at Grantham, North Shields, and Dunino; on the 8th at Clifton, St. John's Wood, Rose Hill, Bicester, Cardington, Bedford, and Gainsborough; on the 9th at Midhurst, Lewisham, Greenwich, St. John's Wood, Rose Hill, Oxford, Hartwell House, Cardington, Bedford, Nottingham, Gainsborough, Wakefield, Stonyhurst, and Dunino; on the 23rd at Bicester, Nottingham, Liverpool, Wakefield, and North Shields; on the 24th at Truro, Clifton, Bicester, Hartwell House, North Shields, and Dunino; on the 26th at Helston, Truro, Stone, Hartwell House, Hartwell Rectory, Norwich, Nottingham, Wakefield, and Stonyhurst; on the 27th at Rose Hill, Stone, Hartwell House, Hartwell Rectory, and Norwich; on the 28th at Exeter, Clifton, Lewisham, Greenwich, Stone, Hartwell House, Hartwell Rectory, Linslade, Cardington, Bedford, Norwich, Nottingham, and Wakefield; and on the 30th at Midhurst, Paddington, Norwich, Grantham, and Nottingham. On the 1st June at Helston, Falmouth, and Truro; on the 13th at Lewisham and Greenwich; on the 17th at Oxford, Stone, Hartwell Rectory, Linslade, and Wakefield; on the 27th at Gainsborough, Warrington, Wakefield, and Stonyhurst; on the 28th at Cardington, Bedford, Warrington, Liverpool, and Stonyhurst; on the 29th at Midhurst, Cardington, and Bedford; and on the 30th at Midhurst, Lewisham, Greenwich, Paddington, St. John's Wood, Rose Hill, Oxford, and Bedford.

Thunder was heard but lightning was not seen on the 15th April at Jersey; on the 18th at the Isle of Man; on the 19th at Warrington; on the 21st at Nottingham; on the 22nd at Lewisham; and on the 27th at Cardington, Grantham, Nottingham, and Wakefield. On the 2nd May at Grantham, Holkham, Nottingham, and Stonyhurst; on the 3rd at Exeter and Stonyhurst; on the 4th at Stonyhurst; on the 5th at Exeter, Rose Hill, Bicester, and Nottingham; on the 6th at Guernsey; on the 7th at Hartwell Rectory and Nottingham; on the 8th at Oxford, Stone, Hartwell Rectory, and Holkham; on the 9th at Clifton, Stone, and Hartwell Rectory; on the 10th at Arbroath; on the 21st at Cardington and Holkham; on the 22nd at Clifton and Bedford; on the 23rd at Exeter and Cardington; on the 24th at St. John's Wood, Rose Hill, Nottingham, and Liverpool; on the 26th at Truro, Cardington, Holkham, Gainsborough, Warrington, Liverpool, and Manchester; on the 27th at Exeter, St. John's Wood, Bicester, Oxford, Manchester, and North Shields; on the 28th at Exeter, Cardiff, Rose Hill, Oxford, Gainsborough, and Manchester; on the 29th at Stone, Hartwell Rectory, Nottingham, and Gainsborough; on the 30th at Midhurst, Lewisham, Cardington, Nottingham, Warrington, Liverpool, and Wakefield; and on the 31st at Stonyhurst. On the 1st June at Jersey; on the 14th at Truro and Exeter; on the 15th at Bedford; on the 17th at Bicester, Oxford, Cardington, Gainsborough, Manchester, and North Shields; on the 18th at Liverpool; on the 19th at Manchester; on the 26th at North Shields; on the 27th at Nottingham and Warrington; on the 28th at Cardiff, Clifton, Bicester, Stone, Hartwell House, Hartwell Rectory, Royston, Nottingham, and Manchester; on the 29th at Clifton, Bicester, Stone, Hartwell House, Hartwell Rectory, and Linslade; and on the 30th at Lewisham, Greenwich, Oxford, Stone, Hartwell Rectory, Linslade, and Nottingham.

Lightning was seen, but thunder was not heard, on the 14th April at Jersey and Exeter; on the 15th at Jersey, Rose Hill, Hartwell House, Hartwell Rectory, and Cardington; on the 16th at Jersey and Lewisham; on the 18th at Truro, Exeter, Cardiff, Clifton, Rose Hill, Oxford, Hartwell Rectory, Royston, Nottingham, Liverpool, Manchester, Wakefield, and Stonyhurst; on the 19th at Warrington; and on the 21st at Guernsey. On the 22nd May at Helston; on the 23rd at Rose Hill; and on the 28th at Helston. On the 8th June at Nottingham; on the 28th at Isle of Man; and on the 29th at Royston.

Hail fell on six days in April, on nineteen days in May, and on four days in June, at the different stations during the quarter.

Snow fell on the 4th April at Bicester; on the 11th at Royston; on the 23rd at Royston, Cardington, Bedford, Gainsborough, Leeds, Stonyhurst, York, Durham, and North Shields; and on the 24th at Lewisham, Greenwich, Oxford, Stone, Hartwell Rectory, Linslade, Royston, Cardington, and Holkham.

Solar Halos were seen on thirteen days in April, on five days in May, and on six days in June.

Lunar Halos were seen on ten days in April, on six days in May, and on two days in June.

Fog was prevalent on the 1st April at Exeter; on the 2nd at Clifton, Stone, Hartwell Rectory, and Stonyhurst; on the 4th at Exeter; on the 5th at Linslade; on the 6th at Bicester, Stone, and Hartwell Rectory; on the 7th at Exeter, Clifton, and Grantham; on the 8th at Clifton; on the 11th at Grantham; on the 20th at North Shields and Arbroath. On the 6th May at Bicester; on the 12th at Lewisham; on the 17th at Hartwell House; on the 22nd at North Shields; and on the 29th and 30th at Dunino. On the 20th June at Midhurst and Bicester; on the 22nd and 23rd at Isle of Man; on the 26th at Arbroath; and on the 29th and 30th at Bicester.

Auroræ were seen on the 10th April at Clifton and Warrington; on the 11th at Clifton; on the 14th at Lewisham, Greenwich, Hartwell Rectory, Grantham, Nottingham, and North Shields; on the 15th at Nottingham; on the 18th at Grantham and Nottingham; on the 19th at Clifton, Grantham, and Arbroath; on the 20th at Grantham and Arbroath; and on the 24th, 25th, and 27th at Arbroath. On the 2nd May at Oxford; on the 15th at Hartwell House and Hartwell Rectory; on the 16th at Rose Hill, Stone, Hartwell House, and Hartwell Rectory; on the 17th at Stone, Hartwell House, and Hartwell Rectory; on the 19th at Oxford; and on the 23rd at Stone and Hartwell Rectory. On the 10th June at Oxford; and on the 19th at Grantham.

Lilac in flower on the 8th April at Bicester; on the 10th at Helston; on the 11th at Jersey; on the 17th at Warrington; on the 19th at Oxford; on the 20th at Gainsborough; on the 22nd at Rose Hill; on the 23rd at Linslade; on the 29th at North Shields; and on the 30th at York. On the 5th May at Nottingham; and on the 6th at Wakefield. On the 1st June at Dunino.

Wheat in ear on the 29th May at Worthing. On the 5th June at Jersey and Holkham; on the 6th at Helston and Newport; on the 9th at Gainsborough; on the 11th at Linslade; on the 18th at Isle of Man; on the 20th at North Shields; and on the 22nd at Rose Hill and Nottingham.

Wheat in flower on the 14th June at Helston; on the 15th at Jersey; on the 18th at Holkham; on the 24th at Nottingham; on the 25th at Linslade; and on the 26th at Gainsborough.

Cuckoo first heard on the 16th April at Jersey; on the 20th at Stone, Hartwell House, and Hartwell Rectory; on the 21st at Clifton; on the 22nd at Grantham and Gainsborough; on the 26th at Bicester; and on the 27th at Wakefield.

Swallows first seen on the 2nd April at Hartwell Rectory; on the 3rd at Stone; on the 7th at Bicester; on the 13th at Hartwell House and Grantham; on the 14th at Gainsborough; on the 15th at York; on the 16th at Jersey; on the 17th at Dunino; and on the 20th at Clifton. On the 2nd May at Wakefield; and on the 12th at North Shields.

Meteorological Table, Quarter ended June 30th, 1854.

NAMES OF THE PLACES.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Mean Temperature of the Air.	Highest Reading of the Thermometer.	Lowest Reading of the Thermometer.	Mean Daily Range of Temperature.	Mean Monthly Range of Temperature.	Range of Temperature in the Quarter.	WIND.		Mean Amount of Cloud.	RAIN.		Mean Degree of Humidity.
								Mean estimated Strength.	General Direction.		Number of Days on which it fell.	Amount collected.	
Jersey.....	in. 29.653	51.6	76.0	39.0	10.8	24.0	37.0	°	W, S.W., & N.E.	4.3	31	in. 7.0	0.900
Palmouth.....	.....	52.7	73.0	35.0	16.7	31.0	38.0	°	S.W. & E.N.E.	6.5	42	8.2	....
Truro.....	29.635	52.4	73.0	31.0	16.8	36.7	42.0	°	N. & W.S.W.	6.2	42	6.8	0.811
Torquay.....	.....	51.4	72.0	36.0	12.7	26.7	36.0	°	S.W. & N.E.	....	39	5.1	0.753
Newport.....	29.636	52.2	76.7	25.1	20.1	40.2	51.6	°	S.W. & W.	4.2	36	5.4	0.750
Worthing.....	29.652	51.2	68.0	32.3	12.2	27.4	35.7	°	S.W.	5.2	30	5.3	0.803
Southampton.....	29.684	52.2	74.0	27.9	17.0	33.6	46.1	°	....	5.9	42	7.8	0.752
Clifton.....	29.658	50.7	79.0	26.0	18.4	39.5	53.0	°	S.W. & W.	5.3	41	6.5	0.793
Royal Observatory.....	29.650	51.7	78.5	28.3	21.4	40.7	50.2	°	S.W. & N.E.	....	36	4.9	0.817
Oxford.....	29.667	51.3	80.5	25.6	18.5	42.0	54.9	°	S.W. & N.N.E.	6.5	39	5.8	0.784
Stone.....	29.508	50.0	80.4	24.0	20.7	42.5	56.4	°	Var.	5.8	43	3.5	0.829
Linslade.....	29.669	51.2	80.0	23.0	22.4	44.3	57.0	°	N.E. & S.W.	....	41	5.1	0.727
Royston.....	29.681	52.0	79.5	27.3	19.3	41.4	51.7	°	N, N.E., & S.W.	5.9	58	4.9	0.750
Bedford.....	29.651	52.6	83.5	29.0	19.8	42.3	54.5	°	S.W. & N.N.E.	6.5	42	4.6	0.752
Norwich.....	29.622	50.5	78.0	32.0	18.8	36.2	46.0	°	....	....	31	5.9	0.803
Derby.....	.....	50.1	77.0	30.0	20.2	38.3	47.0	°	....	....	36	4.4	0.712
Holkham.....	29.648	50.5	82.4	29.3	17.6	40.3	53.1	°	S.W. & N.E.	5.2	37	5.5	0.819
Nottingham.....	29.681	50.5	79.0	29.4	22.5	41.7	49.6	°	N.E., S.W., & S.	6.6	38	3.7	0.807
Gainsborough.....	29.637	51.2	81.0	30.0	19.4	40.0	51.0	°	S., S.W., & N.	3.8	32	5.0	0.766
Warrington.....	29.619	50.8	76.1	28.0	18.5	38.1	48.1	°	S.W. & W.	5.7	47	4.2	0.818
Liverpool.....	29.679	52.5	71.4	33.1	12.7	29.6	38.3	°	N.W.	6.1	30	4.0	0.770
Manchester.....	29.658	52.5	77.0	30.0	21.3	40.5	48.0	°	S.W., W., & N.E.	6.1	40	4.1	0.682
York.....	29.586	49.3	72.0	28.5	15.2	32.8	43.5	°	N.E. & S.W.	....	35	5.6	0.881
Durham.....	29.629	48.3	74.0	30.7	13.1	30.3	43.3	°	S.W., & N.W.	8.0	30	5.3	0.837
Arbroath.....	29.593	49.2	74.0	25.0	18.1	36.3	49.0	°	Var.	6.7	35	5.7	0.768

THE REVENUE.

THE revenue accounts for the present and future quarters will be published in a new form, and give the public more complete information than that which has been contained in the statements hitherto published.

1. The account of the revenue has been hitherto confined to Great Britain; the revenue received in Ireland has never formed part of the accounts hitherto published; the accounts have therefore been deficient by upwards of 4,000,000*l.* of net annual revenue. The account published on the 11th inst., for the quarter ending the 10th, is a complete account of the net revenue of the United Kingdom. The results of fiscal legislation will be better shown by a complete than by a partial statement of revenue collected.

2. The results of the comparison with the corresponding quarter and year ending on the 10th of October, 1853, will be shown as heretofore; but as the financial year, commencing in April, is the year of the budget, the year for which the public expenditure is voted, and the year of account, there will be added to this comparison one showing the increase or decrease in the portion of the financial year which shall have expired at the termination of each quarterly account.

3. The account of the income and charge of the consolidated fund has hitherto been a very partial and imperfect one. Instead of showing the application of the quarter's receipts from all sources, it has been limited to the receipts and charges of the consolidated fund in Great Britain, omitting the income and charges for Ireland, and suppressing altogether those receipts which may have been appropriated by Parliament to the payment of other public services than those charged permanently on the consolidated fund. The account published on the 11th of October, and the future quarters, will show not only the receipts derived from the ordinary revenue, from imprest moneys, and from repayments, but will embrace all extraordinary receipts, whether derived from temporary or permanent loans, exchequer bills, or any other moneys applicable to the payment of public services; it will be a complete debtor and creditor statement of all public moneys received in the quarter, and of the appropriation of the same.

REVENUE.

Abstract of the Net Produce of the Revenue of the United Kingdom in the Years and Quarters ended 10th October, 1853 and 1854; showing the Increase or Decrease thereof.—(Continued from page 284.)

Sources of Revenue.	Years ended 10th October.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs.....	21,632,896	20,193,641	....	839,255
Excise	15,398,729	15,526,892	128,163	....
Stamps	7,066,715	6,998,567	....	68,148
Taxes.....	3,171,051	3,154,606	....	16,445
Property Tax	5,620,852	6,972,093	1,351,241	....
Post Office.....	1,041,000	1,340,000	299,000	....
Crown Lands.....	402,883	271,572	....	131,316
Miscellaneous	191,940	155,797	....	36,143
Total Ordinary Revenue	53,926,071	54,613,168	1,778,404	1,091,307
Imprest and other Moneys .	743,352	768,775	25,423	....
Repayments of Advances....	2,037,412	1,341,472	....	695,940
Total Income.....	56,706,835	56,723,415	1,803,827	1,787,247
			Net Increase £16,580	

Sources of Revenue.	Quarters ended 10th October.			
	1853.	1854.	Increase.	Decrease.
	£	£	£	£
Customs	5,663,113	5,513,006	....	150,107
Excise	4,810,083	5,164,995	354,912	....
Stamps	1,736,173	1,748,269	12,096	....
Taxes.....	129,219	116,680	....	12,539
Property Tax.....	1,947,354	2,517,040	569,686	....
Post Office.....	236,000	344,000	108,000	....
Crown Lands.....	50,000	61,572	11,572	....
Miscellaneous	57,688	36,947	....	20,741
Total Ordinary Revenue	14,629,630	15,502,509	1,056,266	183,387
Imprest and other Moneys .	107,759	92,216	....	15,543
Repayments of Advances....	582,519	275,371	....	307,148
Total Income.....	15,319,908	15,870,096	1,056,266	506,078
			Net Increase £550,188	

Increase and Decrease of the Revenue in the Six Months of the Financial Year, from the 5th of April to the 10th of October, 1854, as compared with the corresponding periods of the preceding year.

Increase.—Excise, 263,342*l.*; Stamps, 41,748*l.*; Property Tax, 854,790*l.*; Post Office, 236,000*l.*—*Total Increase*, 1,395,880*l.* *Decrease.*—Customs, 509,407*l.*; Taxes, 87,095*l.*; Crown Lands, 124,316*l.*; Miscellaneous, 20,805*l.*; Imprest and other Money, 166,508*l.*; Repayment of Advances, 409,852*l.* *Total Decrease*, 1,317,983*l.* *Net Increase*, 77,897*l.*

Account showing the Net Revenue and other Receipts of the Quarter ended the 10th of October, 1854; the Application of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.

Surplus balance beyond the charge of the Consolidated Fund, for the quarter ended July 5th, 1854, viz.:—	£	Amount applied out of the net income for the quarter ended October 10th, 1854, to redemption of Exchequer Bills (Deficiency) for the quarter ended July 5th, 1854, exclusive of 881,196l., the surplus charged to the Sinking Fund for the said quarter, similarly applied	£
Great Britain	166,555	Amount applied to pay off Exchequer Bills (Ways and Means) issued in the quarter ended July 5th, 1854	3,148,094
Ireland	85,000	Amount applied to supply services in the quarter ended October 10th, 1854:—	500,000
Balance of instalments of Exchequer Bonds appropriated by Parliament to Supply Services, remaining unissued on July 5th, 1854	15,870,096	Out of Consolidated Fund	£6,106,975
Income received in the quarter ended October 10th, 1854, as shown in Account I.	2,324,762	Out of Exchequer Bonds	2,399,165
Instalments received in the quarter ended October 10th, 1854, for Exchequer Bonds issued	Nil.	Charge of the Consolidated Fund for the quarter ended October 10th, 1854, viz.:—	8,506,140
Amount of Exchequer Bills (Supply) issued in the quarter ended October 10th, 1854	18,446,413	Permanent Debt	5,846,194
Balance, being the deficiency upon the charge of the Consolidated Fund in Great Britain, and for which Exchequer Bills (Deficiency) will be issued, but reducible by the amount of the Sinking Fund (264,670l.), included in the said charge, to the sum of 2,199,912l.	2,460,582	Terminable Annuities	1,365,682
		Interest on Deficiency Bills	7,450
		Sinking Fund	261,670
		The Civil List	100,117
		Other charges on Consolidated Fund	470,280
		Advances for Public Works, &c.	553,408
		Balance of Instalments of Exchequer Bonds appropriated by Parliament to supply services, remaining unissued on October 10th, 1854	10,597
		Surplus balance beyond the charge of the Consolidated Fund for the quarter ended October 10th, 1854, viz.:—	
		Great Britain	134,363
		Ireland	134,363
	£20,906,995		£20,906,995

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, during each Week of the Third Quarter of 1854; together with the Monthly and Quarterly Average—(Continued from p. 285.)

[Communicated by the Comptroller of Corn Returns, H. F. JADIS, Esq.]

Weeks ended on a Saturday, 1854.		Weekly Average.					
		Wheat.	Barley.	Oats.	Rye.	Beans.	Peas.
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
July	8	76 6	36 6	30 2	48 2	48 7	47 1
"	15	74 6	36 10	29 8	51 1	48 10	45 9
"	22	71 10	37 1	30 7	47 9	48 11	45 4
"	29	69 8	36 3	29 10	45 8	47 5	47 3
Average for July		73 1	36 8	30 0 $\frac{3}{4}$	48 2	48 5	46 4
August	5	64 8	35 9	29 11	43 5	47 4	41 7
"	12	62 3	34 8	28 11	40 11	45 0	43 6
"	19	64 0	34 6	27 9	43 1	49 10	44 8
"	26	63 7	32 6	28 7	40 5	47 4	39 8
Average for August		63 7	34 4	28 9	41 11	47 4	42 4
Sept.	2	62 3	32 5	27 8	38 4	48 2	35 7
"	9	59 4	30 9	27 6	36 9	46 0	36 0
"	16	52 5	29 2	25 11	36 11	45 10	36 10
"	23	53 2	29 2	24 7	34 11	42 9	37 3
"	30	55 9	29 2	25 3	35 2	42 11	37 11
Average for September ...		56 7	30 1	26 2	36 5	45 1	37 1
Average for the Quarter ..		63 10	33 5	28 2	41 8	46 10	41 6

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ended 5th July, 5th August, and 5th September, 1854; the Quantities Entered for Home Consumption during the same Months; and the Quantities remaining in Warehouses at the close thereof.—(Continued from p. 285.)

[Compiled from the "London Gazette."]

WHEAT.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1854.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
5th July	356,174	489	356,663	356,615	489	357,104	..	..	..
5th Aug.	276,061	4,989	281,050	..	..	..	..	..	..
5th Sept.	190,691	7,364	198,055	..	..	..	..	..	..

WHEAT-FLOUR.

Months ended	Imported.			Quantities entered for Home Consumption.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1854.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.	cwts.
5th July	212,551	9,928	222,479	212,551	9,928	222,479	..	..	..
5th Aug.	192,605	57,499	250,103	..	..	..	..	..	..
5th Sept.	170,241	57,972	228,213	..	..	..	..	..	..

Fluctuations in the Stock and Share Market during the Months of July, August, and September, 1854.—(Continued from p. 286.)

Stocks and Shares.	Amount of Share.			Price on the			Highest Price during the Months of			Lowest Price during the Months of		
	July.	August.	Sept.	July.	August.	Sept.	July.	August.	Sept.	July.	August.	Sept.
Consols .....	...	...	...	91½	...	...	91½	95½	97½	90½	92	91½
Exchequer Bills .....	...	...	...	1s. 6d.	...	...	3s. 1m.	4s. 1m.	9s. 1m.	1s. Dis.	1s. Dis.	2s. 1m.
RAILWAYS—												
Brighton	Stock	Stock	Stock	100	100	100	107½ x.d.	107½	106	106	104	102½
Calcuttan	Stock	Stock	Stock	100	100	100	64 ex.d.	66	66½	61½	61½	61½
Eastern Counties	Stock	Stock	Stock	20	20	20	13½	13½	12½	12½	14½	11½
Great Northern	Stock	Stock	Stock	100	100	100	88½	89	90	88½	82½	86½
Great Western	Stock	Stock	Stock	100	100	100	80	79½	75½	77½	69½	71½
London and North-Western	Stock	Stock	Stock	100	100	100	104½	104½	105½	103½	100	106½
Midland	Stock	Stock	Stock	100	100	100	67½	70	73	65½	66½	69
Leicestershire and Yorkshire	Stock	Stock	Stock	100	100	100	71½ ex.d.	73	74½	67½	67½	70
North Staffordshire	20	20	20	17½	17½	17½	13½	13½	13½	13½	13½	13½
South-Eastern	Stock	Stock	Stock	100	100	100	64 ex.d.	65	66	62½	64½	63½
South-Western	Stock	Stock	Stock	100	100	100	83½ x.d.	84	86	81½	82	82
York, Newcastle, & Berwick	Stock	Stock	Stock	100	100	100	75	75	79½	72½	73½	75½
York and North Midland	Stock	Stock	Stock	100	100	100	56½	56½	57½	53	54½	54½
Northern of France	20	20	20	16	16	16	32½	32½	35	32½	32½	34½
East Indian	20	20	20	20	20	20	21½	21½	23½	21½	21½	22½

Average Price of Meat as sold in Smithfield Market in the Months of July, August, and September, 1854.—(Continued from p. 286.)

[Communicated by W. D. OSWALD, Esq., of the Board of Trade.]

Description.	Amount.			Description.			Description.		
	July.	August.	Sept.	July.	August.	Sept.	July.	August.	Sept.
Inferior Beasts	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
2nd class	3 6	3 6	3 6	3 6	3 6	3 6	3 6	3 6	3 6
3rd class	3 10	4 0	4 0	4 0	4 0	4 0	4 0	4 0	4 0
4th class	4 4	4 8	4 8	4 8	4 8	4 8	4 8	4 8	4 8
4th class (Steeds)	4 10	5 0	5 0	5 0	5 0	5 0	4 6	4 6	4 6
Inferior Sheep	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
2nd class	3 2	3 2	3 2	3 2	3 2	3 2	3 2	3 2	3 2
3rd do. (long coarse woolled)	3 6	3 6	3 6	3 6	3 6	3 6	3 6	3 6	3 6
4th do. (South Down)	4 4	4 4	4 4	4 4	4 4	4 4	4 4	4 4	4 4
Lambs	4 10	5 0	5 0	5 0	5 0	5 0	4 6	4 6	4 6

N.B.—Price of Meat at the rate of 8 lbs. Avoirdupois to the stone, sinking the offal.

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